NAVAL FACILITIES ENGINEERING COMMAND

GUIDE PERFORMANCE WORK STATEMENT (GPWS)

FOR

CENTRAL HEATING PLANT AND DISTRIBUTION SYSTEMS

OPERATION, MAINTENANCE, AND REPAIR

SEPTEMBER 1987

PREPARED BY

SOUTHERN DIVISION

NAVAL FACILITIES ENGINEERING COMMAND

CHARLESTON, SOUTH CAROLINA

NAVAL FACILITIES ENGINEERING COMMAND
GUIDE PERFORMANCE WORK STATEMENT (GPWS) FOR
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USER FEEDBACK/COMMENT SHEET
GUIDE PERFORMANCE WORK STATEMENT FOR
CENTRAL HEATING PLANT AND DISTRIBUTION SYSTEMS
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This User Feedback/Comment Sheet has been provided to allow the user of the Guide Performance Work Statement (GPWS) for Wastewater Collection Systems and Treatment Facilities Operation and Maintenance to provide comments and recommended changes to SOUTHNAVFACENGCOM.

The success of SOUTHNAVFACENGCOM's continuing GPWS revision and improvement efforts will depend heavily upon input provided by users at the activity level and at the NAVFACENGCOM Engineering Field Divisions. Be assured that any comments received will be reviewed in detail and incorporated into the next edition of the GPWS, if appropriate. Such comments should be provided (as a minimum) immediately after initial receipt/use, and again approximately six months into the initial contract term. Comments should be as specific and detailed as possible, and should include:

- Suggested changes in format.
- Comments on the effort required to tailor the GPWS.
- Alternate clauses and approaches to describing the services to be provided.
- Adequacy of the technical specification.
- Alternate procedures and formats for displaying historical data, Schedule of Deductions, Contract Line Items, etc.
- Adequacy of the User's Guide and Quality Assurance Guide.
- Effectiveness and practicality of the suggested quality assurance plans.

COMMENTS
(Attach additional sheets, if required)

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USER:_____ _____
(Activity Name) (Activity Address)

POINT OF CONTACT:_____ _____
(Name/Code) (Telephone Number)

Mail User Feedback/Comment Sheets to:
Commanding Officer
Southern Division, Naval Facilities Engineering Command (Code 1613)
2155 Eagle Drive, PO Box 190010
Charleston, SC 29419-9010

USER’S GUIDE

GUIDE PERFORMANCE WORK STATEMENT FOR

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USER'S GUIDE
GUIDE PERFORMANCE WORK STATEMENT FOR
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I. INTRODUCTION

A. Purpose. This NAVFAC Guide Performance Work Statement (GPWS) has been written to provide assistance in preparing facilities support contracts to procure central heating plant and distribution systems operation, maintenance, and repair services. Contracts for such services may be a continuing contracting effort or conversion of services from in-house to contract performance under the Commercial Activities (CA) program. This NAVFAC GPWS may be used in either application. This GPWS Package consists of a User's Guide, guide contract sections B, C, and J in the Uniform Contract Format, and a Quality Assurance (QA) Guide.

1. NAVFAC manual MO-327, *Service Contracts: Specifications and Surveillance*, provides extensive information on the preparation of NAVFAC facilities support contracts, from guidance on making the initial decision to contract a given function through the entire PWS and surveillance program development process. This User's Guide is designed to supplement and to be used in conjunction with the MO-327 in developing a PWS for central heating plant and distribution systems operation, maintenance, and repair services. It provides specific guidance on developing and tailoring the GPWS, special items which must be considered if the specification is being written in conjunction with a CA program study, and general guidance on required pre-award actions. Additional guidance on implementing CA program requirements can be found in the Supplement to OMB Circular A-76 and in OPNAVINST 4860.7B.

2. Sections B, C, and J provide suggested formats for displaying contract line (bid) items, technical specifications which the user may tailor to site specific needs, and attachments which provide supplemental information, historical data, etc.

3. The QA guide is designed to provide the framework for development of a comprehensive contract surveillance program. The user should modify and expand upon the sample QA plans provided as the GPWS is tailored.

B. Function Definition. For purposes of this GPWS, the central heating plant and distribution systems function is defined to include all labor, transportation, equipment, materials, supplies, management, coordination, and supervision required to perform central heating plant and distribution systems operation, maintenance, and repair services. Work includes the performance of service work, preventive maintenance of equipment, operation of equipment, and other services as described in Section C.

C. Responsibilities

1. Experience has shown that the best method of developing a facilities support contract specification is to involve a number of activity personnel, each having a portion of the knowledge and experience required to put the entire package together. A team of experienced activity personnel should be formed and a team leader appointed. At least one member of the team must be intimately familiar with each of the following areas:

a. Must be familiar with and understand the applicable GPWS(s) and QA Guide(s).

b. Must have working knowledge of basic contracting procedures.

c. Must have first hand knowledge of the services, and/or equipment/system operations, repairs, and maintenance to be provided by contract.

d. Must be able to identify local needs/requirements that are different from the GPWS and apply specifically to the activity.

2. The following activity personnel are suggested as members of the specification development team.

a. Specification Writer. The central heating plant and distribution systems specification is most properly prepared by an engineer or engineering technician at the activity who has had some experience in writing facilities support contracts. The use of a planner and estimator (P&E) is also appropriate if one is experienced with writing contract specifications. The writer, regardless of who he/she is, should have attended the Civil Engineer Corps Officers School (CECOS) course on Facilities Support Contracts. Assistance and guidance may be requested from the geographical NAVFACENGCOM Engineering Field Division (EFD), Code 10.

b. Functional Manager/Customer. The functional manager is the technical representative of the team who is most familiar with the function to be contracted. Early in the tailoring process the Utilities Division Director or other heating plant functional expert must determine the total scope of the services required, and the specific needs of the activity which may differ from this GPWS.

c. Contract Specialist. The Contract Specialist provides overall contractual guidance in the preparation of the specification. This person will work with the writer in the preparation of sections B, C, and J, and will prepare the majority of the clauses in sections E, F, G, H, I, K, L, and M. Additionally, there are many pre-award and post-award contract actions to be initiated by the Contract Specialist.

d. CA Program Manager. If the specification is being prepared under the CA program, the CA Program Manager provides overall guidance on the CA program, and will ensure that the specification is developed in conjunction with required most efficient organization and management studies.

3. The tailored specification should be reviewed by customer and functional manager representatives, the activity’s Facilities Support Contract Manager (FSCM), Quality Assurance Evaluators (QAEs), the Engineering Division Director, and the Facilities Management Engineering Division Director. Consult appropriate EFD instructions to determine if EFD review/approval is required prior to solicitation.

II. GPWS DEVELOPMENT AND USER CONSIDERATIONS. This section of the User’s Guide discusses certain assumptions which were made and special items that were considered during the development of the Central Heating Plant and Distribution Systems Operation, Maintenance, and Repair GPWS, and provides general

information and considerations that the user should be aware of during the tailoring process.

A. Development of the GPWS. In developing this GPWS, a tree diagram, as described in NAVFAC MO-327, was used to identify each of the major subfunctions for central heating plant and distribution systems operation, maintenance and repair. These subfunctions were further subdivided to develop basic work requirements and attributes for each subfunction. Once all of the basic work requirements were identified for each subfunction, the requirements were put in narrative form and a Performance Requirements Summary Table was developed.

B. GPWS User Considerations. The clauses and provisions of this GPWS are arranged in the uniform contract format as required by the Federal Acquisition Regulation (FAR). The sections to which they are assigned shall not be changed.

1. This GPWS contains sections B, C, and J only. These sections contain information and clauses peculiar to the technical services required, while Sections D, E, F, G, H, I, K, L, and M contain contract clauses and provisions more closely related to administrative and contractual requirements. Since the latter group will generally be the same in the majority of NAVFAC contracts, their inclusion in each GPWS would be unnecessary duplication. Therefore, this group, to be referred to as the standard facilities support contract clauses, shall be packaged at each geographical EFD and contracting office, and made available to specification writers as required.

2. FAR clauses and provisions may be added or deleted as required by the FAR for specific functions, dollar limitations, bonding, small businesses, etc. They may not be altered unless specifically authorized by the FAR. The clauses in sections I and L, other than those requiring tailoring (i.e. blanks to be completed), may be included by reference. All other FAR clauses and provisions shall be included in full text. Procurement offices shall make available to bidders the full text of all clauses incorporated by reference upon request.

3. The "SCHEDULE OF DEDUCTIONS" and "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" clauses are NAVFAC, not FAR clauses, and shall not be altered without NAVFAC approval. All other non-FAR clauses and provisions in the standard facilities support contract clauses should be used substantially as shown or deleted if not applicable to the solicitation. Extensive deliverable performance requirements should not be added to these clauses, but should be included in Section C.

4. Technical Specification

a. Section C, which describes the services to be provided, should be a performance specification. That is, over defining the Contractor's responsibilities in terms of methods or procedures should be avoided in writing the technical specifications since we hope to purchase not only the Contractor's labor, but also his/her expertise in the services to be provided and management of those services. A performance oriented specification should minimize the use of words describing "how to" and emphasize the performance standards to which the Contractor must operate and maintain the heating plant and distribution systems. Outputs must be described specifically and as explicitly as possible while leaving the Contractor latitude to manage his/her own work force and choose his/her own methods for accomplishing the work.

b. On the other hand, the specification must provide enough information to clearly and precisely define the magnitude (number of services we want to buy) and quality of each of the services to be provided, as well as the scope or limit of each. This is accomplished in the GPWS by specifying, in addition to the desired outputs, schedules of accomplishment and/or specific time limitations in which all services must be completed; listing mandatory operating procedures or steps that the Contractor must follow for some services; and providing historical data on the magnitude of services provided under previous contracts or by in-house forces. Such information will only slightly restrict the Contractor's latitude in managing his/her workforce, but will help ensure all bidders clearly visualize the magnitude of effort which will be required to provide the clearly defined scope of work. Typically this will result in more accurate/realistic Contractor bids, make payment deductions for unsatisfactorily performed or non-performed work easier to calculate, and reduce the number of contract administration problems.

5. As you use this GPWS you will find in many instances there will be a "NOTE TO SPECIFICATION WRITER". These notes provide the user with additional information, advise the user to select the appropriate clause, or delete the clause in its entirety. If the final document is to be printed from the DISKETTE, it is not necessary to delete the notes as the equipment will print a justified copy without the notes. There are also many areas within the text of the GPWS where notes indicate that additional information must be provided; i.e., start times, dates, quantities, etc. These notes will always be enclosed by the symbol "!!". All that is required is to replace the note with the required information.

6. The Maximum Allowable Defect Rates (MADRs) provided in the Performance Requirements Summary Table are sample rates only. Refer to NAVFAC MO-327 and the NAVFAC *Random Sampling for Extrapolated Deductions (RSED V3.1)* implementation guide, and select rates that are appropriate to your activity.

III. TAILORING THE GPWS. The NAVFAC GPWS for central heating plant and distribution systems operation, maintenance, and repair services is not intended to fit the requirements of a specific activity, but rather, is to serve as a model to be tailored by activities in preparing their specific PWS. The first step in tailoring a GPWS to a specific case is for the user to become intimately familiar with the GPWS and its User's Guide. The user must know what is, and is not, included in the GPWS and what was intended before he/she can assess modifications required. The PWS is the instrument that lays out the functional and technical requirements and ultimately becomes part of a contract. The User's Guide provides the user with information concerning the GPWS and provides instructions on tailoring it to his/her use. Users should not assume that the GPWS can be "plugged" into their application with little or no effort. A detailed analysis of the activity's requirements will be required.

A. Getting Started

1. The first step in tailoring this GPWS to a specific user activity must be to determine one of the following:

a. Requirements are currently contracted and this will be a continuation of the contracted services or the consolidation of several contracts. If this is the case, the GPWS may be tailored to accomplish any desired scope of work and level of performance.

b. Requirements to be included are subject to a CA cost comparison study under OMB Circular A-76. If this is the case, it is mandatory that the scope of work and level of performance specified be equivalent to the current in-house effort or to the level of effort that can be achieved by the Most Efficient Organization (MEO) if the function is retained in-house. Additional information on tailoring of the GPWS for a CA program study is included in paragraph IV of this User's Guide.

2. The next step should be a thorough review of Chapters 2, 3, and 4 of NAVFAC MO-327. These three chapters outline in some detail how to perform a job analysis to determine the specific subfunctions to be contracted (including specific work requirements and attributes) and how to use the job analysis information and data collected to actually write the PWS. As the job analysis is being performed, the user should compare his/her unique activity requirements with GPWS requirements to determine if any major changes are required, or if some of the questions being identified in the job analysis have already been answered in the GPWS. If major changes are required, the user will need to re-write the affected GPWS section. A thorough job analysis will make the actual tailoring of the GPWS and re-writing of paragraphs relatively easy since all required data will be readily available and the subfunctions to be contracted will be well defined.

B. Contract Line Item (Section B) Requirements. A combination fixed-price and indefinite quantity contract is used in this GPWS. The contract line items shown in Section B are intended to encompass all of the services to be provided in the technical specifications. Of course they must be tailored to account for work items added or deleted during the job analysis process and the projected start date of contract performance. The line items are made up of two types of work items: fixed-price items and fixed unit price (indefinite quantity) items. All new work items added by the user must fall into one of these two categories.

1. Fixed-Price Requirements. Fixed-price items are bid and payment is made for the total performance of a given work item over a given period of time (usually one month). These work items are either fixed in scope (time, location, frequency, quantity, etc. are known) or adequate historical data is available to make a bidable estimate. Because the scope of work is known, the Contractor agrees to perform a given function for a total price, and in essence there is one work order. The Contractor performs the work as scheduled and invoices are submitted for the services provided.

2. Indefinite Quantity Work Items. All items not included in the fixed-price portion of the contract are considered indefinite quantity work items. That is, the Contractor agrees to perform this work on an "as ordered" basis, and a fixed unit price to perform one occurrence or a given quantity of each type of work is bid. Payment for this type of work is based on the unit price bid per unit times the number of units performed. Because each Government order for indefinite quantity work is paid for separately, each and every work order must be inspected and accepted as being satisfactorily completed before payment may be made. Indefinite quantity work in this GPWS is divided into two separate categories, each with its own contract line item and set of subline items.

a. Unit Priced Tasks. Bid prices for unit priced tasks include all labor, materials, and equipment for performing a given quantity of work, such as painting of 100 linear feet of pipe or replacement of electrical wiring. The unit prices bid are multiplied by an estimated quantity of units to be ordered

during the contract term, but only for purposes of bid evaluation, since work will only be paid for as ordered and completed.

b. Engineered Performance Standards (EPS) Hour Labor. This type of indefinite quantity work, which is also referred to as "level of effort work", should be used only in connection with maintenance, repairs, and alterations to facilities and/or equipment, and then only when such work cannot be identified in advance in sufficient detail to be included in the fixed-price or indefinite quantity - unit priced portions of the contract. The unit prices bid for labor include all costs to provide one EPS estimated hour of labor. The Contractor is reimbursed for the cost of materials (except for pre-expended bin materials) and equipment, as specified in the "ESTIMATES" clause of Section C. NOTE: Level of effort provisions used in a CA program PWS are considerably different than those in non CA studies. Refer to paragraph IV.B of this User's Guide for further guidance.

c. As many indefinite quantity work requirements as possible should be included as unit priced tasks vice as level of effort work since unit priced tasks are easier to understand, easier for Contractors to bid on, the work is easier to order and administer, and materials and equipment costs are included in the unit prices bid. Regardless of which of the two types of indefinite quantity work are used, the estimated quantities provided in the solicitation for bid evaluation must be realistic estimates of the anticipated quantities to be ordered during the contract term.

3. Partial First Year of Performance

a. Because of funding restrictions, only four types of maintenance service contracts may be awarded for a 12-month period to begin at any time during the fiscal year. All other contracts, including those for central heating plant and distribution systems services must be funded using funds from the fiscal year in which the work will be performed. This means that only contracts with terms beginning on 1 October may be awarded for a full 12-month period. Contract terms beginning on any other date must be awarded for something less than 12 months and must end on or before 30 September. Normally such contracts will not be awarded for less than three months. For example, a contract which begins on 1 April would have a six month initial term, and then options to extend for up to 54 additional months. However, no single option period could be more than 12 months long, and the total term of contract could not exceed 60 months.

b. Section B of this GPWS assumes that the initial contract period will be less than 12 months. The user must also consider each of the following items in this situation.

(1) As illustrated in this GPWS, at least two sets of contract line items will be required in Section B. One set for the initial (base) period for performance of work from the specified contract start date through 30 September. The other set will be for performance during the first 12 month option period, if the Government exercises its option to extend the contract. In most cases, only the initial performance period and first option period may be pre-priced unless the specification is being written for a CA program study. See paragraph IV.C of this User's Guide.

(2) Section C, the technical specifications, must clearly outline the scope of work for both the initial and first 12 month option periods since

the work load can vary significantly from month to month. For example, the specification must state whether or not annual preventive maintenance inspections will be performed during the initial period.

(3) Two Schedules of Deductions, one for the initial period and one for the first option period, must be included. Of course the items of work and number of units in the Schedules of Deductions must agree with the fixed-price contract line items in Section B and the scopes of work defined in Section C. Paragraph III.D of this User's Guide provides more in depth information on the development of Schedules of Deductions.

(4) The "TERM OF THE CONTRACT" clause in Section F should read as follows:

"TERM OF CONTRACT. The initial contract term shall be for a !INSERT NUMBER! month period commencing on !INSERT DATE! and ending on !INSERT DATE!. The Government has the option to extend the term of the contract in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT-SERVICES" clause in Section I. In the option periods the Government will adjust the prices, as required, based on new Department of Labor Wage Rate Determinations."

(5) The "BASIS FOR AWARD" clause should read as follows:

"BASIS FOR AWARD. The low bidder for purposes of award shall be the conforming, responsive, responsible bidder offering the lowest total price for Contract Line Items 0001, 0002, 0003, 0004, 0005, and 0006. However, the initial award will include only contract line items 0001, 0002 and 0003. Bids are solicited on an "all or none" basis and provision 52.214-10 (CONTRACT AWARD - SEALED BIDDING (April 1985)) in Section L is hereby modified. FAILURE TO SUBMIT BIDS FOR ALL ITEMS AND QUANTITIES LISTED SHALL BE CAUSE FOR REJECTION OF THE BID."

c. If the initial contract term will be projected to begin on 1 October, make the following changes to the GPWS contract line items, Section B:

(1) The dates shown in contract line items 0001, 0002, and 0003 should read "(1 October !INSERT YEAR! through 30 September !INSERT YEAR!)

(2) Delete contract line items 0004, 0005, and 0006 in their entirety, unless the PWS is being written under the CA program (see paragraph IV.C of this User's Guide).

C. Technical Specifications (Section C). The preparation of the technical specifications will require knowledge of the heating plant and associated equipment. A technical description of the heating plant should be provided as Attachment J-C1. The combustion control system for the boilers should be described in detail. Fuel high heating value (HHV) should be obtained from the EFD/NAVFAC for the particular type fuel used. Major components should be listed here to give the Contractor some idea of equipment type, system complexity, capability and condition. Critical systems may be identified separately. A distribution system equipment list should be provided as Attachment J-C2. Describe lengths of various pipe sizes, type of expansion joints, above ground conduct or direct burial, tunnel, trenches, number of facilities served, number of pumping stations, and any special problems, (i.e. flooding etc.).

D. Schedule of Deductions. The Schedule of Deductions is one of the most important items that the specification writer must consider in tailoring of this

GPWS, since it directly affects the degree of difficulty required to make payment deductions for unsatisfactory performance or non-performance of work. The schedule, which is used in conjunction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" clause, Section E, requires the successful bidder to break the fixed-price portion of the bid down for each of the fixed-price work items in the PWS. The completed schedule must be provided by the Contractor within 15 days after award of the contract. The Schedule of Deductions clause and suggested schedule formats follow. The user should contact the activity's geographic EFD concerning placement of the Schedule of Deductions in the contract, since requirements vary from EFD to EFD.

"SCHEDULE OF DEDUCTIONS

a. Within 15 days after contract award, the successful Contractor shall provide an acceptable Schedule of Deductions for the Base period of the contract. No work may commence until such Schedule of Deductions is approved by the ACO. The total of the Schedule of Deductions must equal the amount entered for Contract Line Item 0001. Schedules of Deductions for the option years which include any labor adjustment granted shall be revised within 15 days of notice to extend the contract. If this contract is modified, the Contractor shall revise the Schedule of Deductions within 15 days of the agreement to modify the contract. Prices shown in the Schedule of Deductions will be utilized in conjunction with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" clause, Section E, in making payment deductions for non-performance or unsatisfactory performance. Unbalancing in the Schedule of Deductions submitted shall be cause for withholding approval and requiring resubmittal of a balanced schedule, and may be grounds for TERMINATION FOR DEFAULT. The Government reserves the right to unilaterally establish a Schedule of Deductions in the event the successful Contractor presents a Schedule of Deductions which is unbalanced or materially deficient. The approved Schedule of Deductions shall be a part of the contract. DO NOT SUBMIT THE SCHEDULE OF DEDUCTIONS WITH BID.

b. The Government's estimate of the value of work will be based on the Schedule of Deductions for the fixed-price portion of the contract and the Schedule of Indefinite Quantity Work for the indefinite quantity portion of the contract in all instances except the following: for partially performed fixed-price work items, the Engineered Performance Standards (EPS) manuals or, if not applicable, other estimating sources will be utilized to estimate the workhour value of the unperformed portion of the work. For deductions of partially performed work, the Government may estimate the Contractor's cost based on wage rates extracted from attached wage determination, locally determined rate for Contractor's overhead and profit, and employees fringe benefits times the estimated labor hours, plus material cost, if applicable."

SCHEDULE OF DEDUCTIONS FOR BASE PERIOD
(DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID)

	ITEM OF WORK	NUMBER OF UNITS	UNIT	UNIT PRICE	TOTAL AMOUNT
I.	MANAGEMENT SERVICES				
	1. Personnel Roster	1	LUMP SUM	$_____	$_____
	2. Safety Plan	1	LUMP SUM	$_____	$_____

	ITEM OF WORK	NUMBER OF UNITS	UNIT	UNIT PRICE	TOTAL AMOUNT
	3. Facility Records and Files	!INSERT!	MONTH	$_____	$_____
	4. Quality Control Plan	1	LUMP SUM	$_____	$_____
		TOTAL MANAGEMENT SERVICES			$_____
II.	HEATING PLANT				
	1. Develop Standard Operating Procedures	1	LUMP SUM	$_____	$_____
	2. Heating Plant Logs and Reports	!INSERT!	DAILY	$_____	$_____
	3. Continuous Boiler Plant Operations	!INSERT!	MONTH	$_____	$_____
	4. Water Sample Testing and Treatment	!INSERT!	MONTH	$_____	$_____
	5. Boiler Plant Maintenance (includes routine maintenance of all boilers and plant equipment, i.e., pipe, pumps, valves, burners, and electrical equipment)	!INSERT!	MONTH	$_____	$_____
	6. Fuel Tank Operating Operating Procedures	!INSERT!	MONTH	$_____	$_____
	7. Boiler Plant Repair (includes individual repair work within !INSERT! manhours and !INSERT $! in material)	!INSERT!	MONTH	$_____	$_____
	8. Boiler Inspection and Certification Assistance	!INSERT!	EACH	$_____	$_____
	9. Calibration of Temperature & Pressure Gages	!INSERT!	EACH	$_____	$_____
		TOTAL HEATING PLANT			$_____
III.	STEAM DISTRIBUTION SYSTEM				
	1. Preventive Maintenance (PM) of Steam Distribution System	!INSERT!	MONTH	$_____	$_____
	2. PM Reports and Records	!INSERT!	MONTH	$_____	$_____

ITEM OF WORK	NUMBER OF UNITS	UNIT	UNIT PRICE	TOTAL AMOUNT
3. Service Calls (include (includes individual repair work within !INSERT! manhours and !INSERT $! in material)	!INSERT!	MONTH	$_____	$_____
		TOTAL STEAM DISTRIBUTION SYSTEM		$_____
		TOTAL FIXED-PRICE (Must equal amount bid for Contract Line Item Number 0001)		$_____

SCHEDULE OF DEDUCTIONS FOR FIRST OPTION PERIOD
(DO NOT SUBMIT SCHEDULE OF DEDUCTIONS WITH BID)

	ITEM OF WORK	NUMBER OF UNITS	UNIT	UNIT PRICE	TOTAL AMOUNT
I.	MANAGEMENT SERVICES				
	1. Personnel Roster	1	LUMP SUM	$_____	$_____
	2. Safety Plan	1	LUMP SUM	$_____	$_____
	3. Facility Records and Files	12	MONTH	$_____	$_____
	4. Quality Control Plan	1	LUMP SUM	$_____	$_____
		TOTAL MANAGEMENT SERVICES			$_____
II.	HEATING PLANT				
	1. Develop Standard Operating Procedures	1	LUMP SUM	$_____	$_____
	2. Heating Plant Logs and Reports	365	DAILY	$_____	$_____
	3. Continuous Boiler Plant Operations	12	MONTH	$_____	$_____
	4. Water Sample Testing and Treatment	12	MONTH	$_____	$_____
	5. Boiler Plant Maintenance (includes routine maintenance of all boilers and plant equipment, i.e., pipe, pumps, valves, burners, and electrical equipment)	12	MONTH	$_____	$_____
	6. Fuel Tank Operating Operating Procedures	12	MONTH	$_____	$_____

ITEM OF WORK	NUMBER OF UNITS	UNIT	UNIT PRICE	TOTAL AMOUNT
7. Boiler Plant Repair (includes individual repair work within !INSERT! manhours and !INSERT $! in material)	12	MONTH	$_____	$_____
8. Boiler Inspection and Certification Assistance	!INSERT!	EACH	$_____	$_____
9. Calibration of Temperature & Pressure Gages	!INSERT!	EACH	$_____	$_____
	TOTAL HEATING PLANT			$_____
III. STEAM DISTRIBUTION SYSTEM				
1. Preventive Maintenance (PM) of Steam Distribution System	12	MONTH	$_____	$_____
2. PM Reports and Records	12	MONTH	$_____	$_____
3. Service Calls (include (includes individual repair work within !INSERT! manhours and !INSERT $! in material)	12	MONTH	$_____	$_____
	TOTAL STEAM DISTRIBUTION SYSTEM			$_____
	TOTAL FIXED-PRICE (Must equal amount bid for Contract Line Item Number 0004)			$_____

E. Davis-Bacon Considerations

1. A Contractor providing maintenance, repair, and/or alteration services to Government facilities must pay his/her employees not less than the minimum wages and fringe benefits specified in the applicable Davis-Bacon wage determination, if the total cost (labor and materials) of the one-time work effort exceeds $2,000. While any facilities support contract may contain Davis-Bacon wage provisions, only CA program contracts may contain options to extend the Davis-Bacon portion of the work. Therefore, Davis-Bacon wage provisions will not normally be included in non CA program contracts.

2. In the case of the GPWS for central heating plant and distribution system operation, maintenance, and repair services, the $2,000 Davis-Bacon limit applies to any individual work order for maintenance, repair, or alteration services, such as painting, pipe replacement, boiler repairs, etc. Because most non CA program contracts do not contain Davis-Bacon provisions, no single work order may exceed $2,000 in total cost. Work requirements greater than $2,000 would be considered out of the scope of a non CA contract and would have to be procured by a separate contract or performed by in-house forces. Refer to paragraph IV of this User’s Guide for additional Davis-Bacon considerations in CA program contracts.

F. Performance Requirements Summary. As the GPWS is being tailored a Performance Requirements Summary (PRS) Table should be prepared. This table will be used primarily in the preparation of QA plans (as discussed in the QA Guide to this GPWS), but it will also be of use to the Administrative Contracting Officer (ACO), FSCM, and customers to provide a convenient overview of services to be provided, standards of performance for those services, intended methods of surveillance, and MADRs. A sample PRS Table, which reflects the work requirements of this GPWS, is provided below. The user should modify this table to reflect the tailored PWS's requirements. NAVFAC MO-327 provides guidance on the development of PRS tables.

PERFORMANCE REQUIREMENTS SUMMARY TABLE

CONTRACT REQUIREMENT	STANDARD INDICATOR OF PERFORMANCE	METHODS OF SURVEILLANCE	MADR
I. OPERATION AND MAINTENANCE OF BOILER PLANT			
A. Operate boiler plant	Perform required operational tests according to approved operating procedures, prepare logs and charts in timely manner		
1. Quality operation			
a. Boiler efficiency	_____%	100% Inspection	5%
b. Water quality			
(1) pH	___ to ___	100% Inspection	5%
(2) TDS	___ ppm	100% Inspection	5%
(3) Causticity	___ ppm	100% Inspection	5%
(4) Phosphate	___ ppm	100% Inspection	5%
(5) Sulfite	___ ppm	100% Inspection	5%
(6) Hardness	___ ppm	100% Inspection	5%
2. Reports, logs, charts	Maintain as required in PWS	100% Inspection	5%
B. Maintain boiler plant			
1. Timely	Perform routine maintenance according to approved operating procedures	100% Inspection	5%
2. Quality maintenance as indicated by plant parameters such as:			
a. Stack temperature	Increase indicates tubes not blown	100% Inspection	5%
b. Feedwater makeup	Increase indicates condensate return problems	100% Inspection	5%

CONTRACT REQUIREMENT	STANDARD INDICATOR OF PERFORMANCE	METHODS OF SURVEILLANCE	MADR
c. Condensate temperature	Increase indicates traps not properly maintained	100% Inspection	5%
d. Manual operation of fully automatic plant	Increase in frequency indicates controls not maintained	100% Inspection	5%
e. Economizer temperature difference	_____ degrees	100% Inspection	5%
f. Air preheater temperature	Air temperature to boilers _____ degrees	100% Inspection	5%
g. Fuel strainer pressure drop	_____ psi	100% Inspection	5%
h. TDS of boiler	Increase indicates need for more frequent blow-downs	100% Inspection	5%
i. Others as applicable			
C. Boiler overhaul	Passes certification every 12 months	100% Inspection	0%
II. MAINTENANCE AND REPAIR OF STEAM DISTRIBUTION SYSTEM			
A. Service calls			
1. Response and completion	Emergency - within !INSERT! minutes Urgent - within !INSERT! hours Routine - within !INSERT! days	Planned Sampling	10%
2. Documentation	Work is documented accurately	Planned Sampling	10%
3. Quality Work	Quality work performed to industrial standards	Planned Sampling	10%
B. Preventive Maintenance			
1. Timely work performance	Within _____ days	Planned Sampling	10%
2. Quality Work	Quality work performed	Planned Sampling	10%

CONTRACT REQUIREMENT	STANDARD INDICATOR OF PERFORMANCE	METHODS OF SURVEILLANCE	MADR
3. Documentation	Work is documented accurately within _____ days of inspection	Planned Sampling	10%
III. MINOR MAINTENANCE AND REPAIR			
A. Estimates	Estimates properly prepared	100% Inspection	5%
B. Timely completion	Completed within !INSERT! days	100% Inspection	5%
C. Quality work	Quality work performed to industrial standards	100% Inspection	5%
IV. MAINTENANCE MANAGEMENT			
A. Maintain facility history files	File all documents	Planned Sampling	10%
B. Monthly workload plan	Submit by 25th of each month	100% Inspection	0%
C. Control of passes and badges	Obtain and display badges	Unscheduled Inspections	0%
D. Compliance with station regulations	Become acquainted with and obey all Government	Customer Complaints	0%
E. Establish and operate quality control program	Program submitted	100% Inspection	0%
F. Care and cleanliness Government furnished property	Facilities returned in same condition	Unscheduled Inspections	0%

IV. COMMERCIAL ACTIVITIES (CA) PROGRAM CONSIDERATIONS. This section of the User's Guide discusses some of the special items which must be considered when using this GPWS to prepare a PWS as part of a CA program study. Included are a number of provisions and changes which must be considered by the user.

A. Scope of Work. The user must remember that the scope of work and standards of performance specified in the PWS must be equivalent to the projected capabilities of the MEO. This GPWS has been written with a somewhat limited scope in that single instances of maintenance and repair are limited to a total cost of $2,000 or less. In CA program solicitations repairs costing more than $2,000 (Davis-Bacon type work) will normally be included, and will require the user to make some modifications to the contract line items (Section B) and the technical specifications
(Section C).

B. Level of Effort (LOE) Work. When LOE work is used in a CA program PWS, labor bids in Section B must be based on EPS craft hours vice full EPS hours. This results in additional changes being required to the "DEFINITIONS - TECHNICAL" and "ESTIMATES" clauses of Section C. Since it is important that the user fully understands the concept of craft hours, the geographical EFD should be contacted for guidance.

C. Pre-Priced Options to Extend. OMB Circular A-76 requires in-house and Contractor bids to be evaluated on at least a three year basis, unless contract funding limitations prevent the initial term from being a full 12 months in length. In this situation pre-priced options must be included to cover at least two fiscal years after the initial term. This means that Section B must contain contract line items for the base period and at least two, one year, pre-priced option periods. For example:

1. If the contract term is projected to begin on 1 October, Section B would include contract line items for the base year (12 months) of performance (items 0001, 0002, and 0003) and at least two, one year, pre-priced option periods (items 0004, 0005, and 0006; and 0007, 0008, and 0009).

2. If the contract term is projected to begin on 1 April, Section B would include contract line items for the initial six month base period of performance through 30 September (items 0001, 0002, and 0003) and at least two one year, pre-priced option periods (items 0004, 0005, and 0006; and 0007, 0008, and 0009).

3. In no case may the total contract term exceed 60 months.

D. Davis-Bacon Considerations. Since in-house maintenance and repair of heating plants and distribution systems services normally includes single repairs and alterations costing in excess of $2,000, such work will have to be included in the CA program PWS. This means that both Service Contract and Davis-Bacon wage determinations will be included in the contract and the Contractor will be required to pay the appropriate minimum wage, depending on the total cost of each work order. Service Contract wages apply to work orders costing less than $2,000. Davis-Bacon wages apply to work orders costing more than $2,000 (labor and materials). Since significant changes will be required to the contract line items (Section B) and other sections of the contract, the user should definitely contact the activity’s geographic EFD.

E. Continuity of Services. The PWS should address certain issues and requirements relative to the change-over from in-house to contracted performance of services. Therefore, add the following "CONTINUITY OF SERVICES" clause to Section C:

"CONTINUITY OF SERVICES

a. To insure continuity of essential services, the successful bidder shall be prepared to fully commence work on the start date of this contract. The phase-in of Contractor forces will occur in conjunction with a major reduction-in-force of in-house Government employees. The Contractor should not assume that Government employees will be available to guide, direct, or specifically orient each Contractor employee.

b. At the time of the contract start date the Contractor shall be prepared to accept approximately INSERT delivery orders for backlogged minor work for

which materials are already on hand. These proposed delivery orders shall be provided to the Contractor and a joint inventory by the Contractor and a Government Representative of all materials on hand shall be conducted within INSERT calendar days after the contract start date. The Contractor shall assume custody of these materials (which shall be used only for the work order for which specifically designated) upon completion of the inventory. The Contractor shall prepare an estimate for each of the backlogged delivery orders following the procedures outlined in the "ESTIMATES" clause of this Section. Completed estimates shall be provided to the ACO within INSERT calendar days after receipt of backlogged urgent minor work and within INSERT calendar days of receipt of other backlogged delivery orders. The Contractor's estimate will be evaluated to determine if: (1) the scope has been clearly and accurately identified, (2) the EPS standards (including work content comparison) have been accurately applied, (3) work which is not covered by EPS has been properly estimated with supporting data presented, (4) equipment and material estimates are reasonable and properly documented, and (5) unit price work has been estimated using the unit prices that were bid. After the estimate has been reviewed and there are no mathematical, typographical, scope, or estimating errors, the ACO will approve the estimate. Completion dates for each backlogged minor delivery order shall be negotiated."

F. Multi-Function CA Contracts. In many instances, CA program studies involve contracts containing more than one functional area or service. For example, the user may want to study electrical power generation services in conjunction with heating plant and distribution systems services, and issue a single solicitation. Since most NAVFAC GPWSs are written in the same format, the technical requirements of Sections C and J of this guide may be easily combined with those of other GPWSs to produce a tailored multi-function PWS.

V. PRE-AWARD CONSIDERATIONS. Prior to award it is essential that the activity consider the following aspects of the operation and administration of a central heating and distribution systems contract.

A. Quality Assurance Evaluator Training. It is vitally important to have an adequate number of qualified QAEs on board prior to the contract start date. In fact NAVFAC EFD contract offices will not allow contracts to be advertised until the activity provides assurance that such resources will be provided. Ideally, QAE(s) should attend the QAE training course provided by each of EFDs. If this training has not been received, the activity should take steps to have the QAE(s) attend the next available course and in the meantime should develop a local training program. EFD Code 10s (Facilities Division) should be contacted for QAE training scheduling or assistance. The QAE should have a good working knowledge of maintenance and inspection procedures and requirements for utility systems. Prior to bid opening it is essential that the QAE become familiar with the specification.

B. Site Visits. The QAE or other Government representative should be prepared to conduct site visits with potential bidders after inviting bids. The purpose of these visits is to familiarize the Contractor with the location of contract requirements, not to provide additional information which should have been included in the PWS. QAE's must be briefed by the ACO or the Contract Specialist as to what can be said to potential bidders during site visits. Customers must also be briefed on precautions to be taken so as not to reveal sensitive information to potential bidders during these visits.

C. Is Government furnished property, if any, ready for turnover?

D. Are adequate QA Plans prepared and ready for use?

E. Additionally, Chapter 7 of NAVFAC MO-327 discusses a number of items which must be considered by the activity prior to the award of a contract, including review of the Contractor's submitted quality control program and a pre-award survey of the apparent low, responsive, responsible bidder.

END OF USER'S GUIDE

GUIDE PERFORMANCE WORK STATEMENT

FOR

CENTRAL HEATING PLANT AND DISTRIBUTION SYSTEMS

OPERATION, MAINTENANCE, AND REPAIR

PART I - THE SCHEDULE

SECTION B: SUPPLIES OR SERVICES AND PRICES/COSTS

!**********
NOTE TO SPECIFICATION WRITER: Some NAVFAC Engineering Field Divisions (EFDs) require additional clauses to be added to Section B. The user must contact the appropriate geographical EFD to identify any additional clauses which may be required.
**********!

!**********
NOTE TO SPECIFICATION WRITER: The final contract line items shall be typed directly on Form SF-36. The example shown here includes column headings which are duplicated on the form. The numbering system for contract line items and subline items shall follow the method prescribed in Subpart 4.71 of the DOD FAR Supplement.
**********!

SCHEDULE

Item No.	Supplies/Services	Maximum Quantity	* Unit	Unit Price	Amount
0001	FIXED-PRICE WORK: Price for labor and material in the BASE PERIOD (!INSERT DATE! through 30 September !INSERT YEAR!) for all work specified in Section C, except for work specifically identified as being included in the indefinite quantity portion of the contract.	!INSERT!	MONTH	$_____	$_____
	TOTAL PRICE FOR CONTRACT LINE ITEM 0001				$_____
0002	INDEFINITE QUANTITY WORK - UNIT PRICED TASKS: Price for labor and material in the BASE PERIOD (!INSERT DATE! through 30 September !INSERT YEAR!) to perform the unit priced tasks listed in the Schedule of Indefinite Quantity Work below. The quantities shown are realistic estimates provided solely for the purpose of bid evaluation and for establishing penal sums of bonds (if required). The price for this bid item is the total of the subline items listed in the Schedule of Indefinite Quantity Work - Unit Priced Tasks.				

SCHEDULE

Item No.	Supplies/Services	Maximum Quantity	* Unit	Unit Price	Amount
	SCHEDULE OF INDEFINITE QUANTITY WORK - UNIT PRICED TASKS				
0002AA	Replace 5 HP pump/motor assembly per paragraph C.!	!INSERT!	EACH	$_____	$_____
0002AB	Replace 10 LF of 8-inch diameter pipe insulation per paragraph C.!	!INSERT!	EACH	$_____	$_____
0002AC	Replace 10 LF of underground 8-inch cast iron pipe per paragraph C.!	!INSERT!	EACH	$_____	$_____
0002AD	Replace 10 LF of 8-inch diameter pipe, above ground, per paragraph C.!	!INSERT!	EACH	$_____	$_____
	TOTAL PRICE FOR CONTRACT LINE ITEM 0002				$_____
0003	INDEFINITE QUANTITY WORK - EPS HOUR LABOR: Price for labor in the BASE PERIOD (!INSERT DATE! through 30 September !INSERT YEAR!) to perform maintenance, repair, and alteration work requirements that cannot be identified in sufficient detail to be included in Contract Line Items 0001 and 0002. This work is described in clauses C.13 and C.14. The quantities listed below are realistic estimates provided solely for the purpose of bid evaluation and for establishing penal sums of bonds (if required). The price for this bid item is the total of the subline items listed in the Schedule of Indefinite Quantity Work - EPS Hour Labor below.				
	SCHEDULE OF INDEFINITE QUANTITY WORK - EPS HOUR LABOR				
0003AA	Electrical	!INSERT!	HR	$_____	$_____
0003AB	Sheet Metal	!INSERT!	HR	$_____	$_____
0003AC	Machinist	!INSERT!	HR	$_____	$_____
0003AD	Pipefitting/Plumbing	!INSERT!	HR	$_____	$_____
0003AE	Moving/Rigging	!INSERT!	HR	$_____	$_____
0003AF	Insulating	!INSERT!	HR	$_____	$_____

SCHEDULE

Item No.	Supplies/Services	Maximum Quantity	* Unit	Unit Price	Amount
0003AG	Instrument Mechanic	!INSERT!	HR	$_____	$_____
0003AH	Paint (Piping and Stencil Labeling)	!INSERT!	HR	$_____	$_____
0003AI	Electronic Controls	!INSERT!	HR	$_____	$_____
0003AJ	Roads/Grounds (Surface Areas)	!INSERT!	HR	$_____	$_____
	TOTAL PRICE FOR CONTRACT LINE ITEM 0003				$_____
0004	FIRM FIXED-PRICE WORK: Price for labor and material in the FIRST OPTION PERIOD for all work specified in Section C, except for work specifically identified as being included in the indefinite quantity portion of the contract.				
		12	MONTH	$_____	$_____
	TOTAL PRICE FOR CONTRACT LINE ITEM 0004				$_____
0005	INDEFINITE QUANTITY WORK - UNIT PRICED TASKS: Price for labor and material in the FIRST OPTION PERIOD to perform the unit priced tasks listed in the Schedule of Indefinite Quantity Work below. The quantities shown are realistic estimates provided solely for the purpose of bid evaluation and for establishing penal sums of bonds (if required). The price for this bid item is the total of the subline items listed in the Schedule of Indefinite Quantity Work - Unit Priced Tasks.				

SCHEDULE OF INDEFINITE QUANTITY WORK

0005AA	Replace 5 HP pump/motor assembly per paragraph C.!	!INSERT!	EACH	$_____	$_____
0005AB	Replace 10 LF of 8-inch diameter pipe insulation per paragraph C.!	!INSERT!	EACH	$_____	$_____
0005AC	Replace 10 LF of underground 8-inch cast iron pipe per paragraph C.!	!INSERT!	EACH	$_____	$_____
0005AD	Replace 10 LF of 8-inch diameter pipe, above ground, per paragraph C.!	!INSERT!	EACH	$_____	$_____

SCHEDULE

Item No.	Supplies/Services	Maximum Quantity	* Unit	Unit Price	Amount
	TOTAL PRICE FOR CONTRACT LINE ITEM 0005				$_____
0006	INDEFINITE QUANTITY WORK - EPS HOUR LABOR: Price for labor and material in the FIRST OPTION PERIOD to perform maintenance, repair, and alteration work requirements that cannot be identified in sufficient detail to be included in Contract Line Items 0004 and 0005. This work is described in clauses C.13 and C.14. The quantities listed below are realistic estimates provided solely for the purpose of bid evaluation and for establishing penal sums of bonds (if required). The price for this bid item is the total of the subline items listed in the Schedule of Indefinite Quantity Work - EPS Hour Labor below.				

SCHEDULE OF INDEFINITE QUANTITY WORK - EPS HOUR LABOR

0006AA	Electrical	!INSERT!	HR	$_____	$_____
0006AB	Sheet Metal	!INSERT!	HR	$_____	$_____
0006AC	Machinist	!INSERT!	HR	$_____	$_____
0006AD	Pipefitting/Plumbing	!INSERT!	HR	$_____	$_____
0006AE	Moving/Rigging	!INSERT!	HR	$_____	$_____
0006AF	Insulating	!INSERT!	HR	$_____	$_____
0006AG	Instrument Mechanic	!INSERT!	HR	$_____	$_____
0006AH	Paint (Piping and Stencil Labeling)	!INSERT!	HR	$_____	$_____
0006AI	Electronic Controls	!INSERT!	HR	$_____	$_____
0006AJ	Roads/Grounds (Surface Areas)	!INSERT!	HR	$_____	$_____
	TOTAL PRICE FOR CONTRACT LINE ITEM 0006				$_____

* HR = EPS Estimated Labor Hour. See definitions in Section C.

END OF SECTION B

PART I - THE SCHEDULE

SECTION C: DESCRIPTION/SPECIFICATION/WORK STATEMENT

TABLE OF CONTENTS

PART I - THE SCHEDULE

SECTION C: DESCRIPTION/SPECIFICATION/WORK STATEMENT

!**********
NOTE TO SPECIFICATION WRITER: A "Work Excluded" clause in Section C is optional but should be used with extreme care in order to avoid giving bidders the impression that if work is not specifically excluded it is automatically included. A "Work Excluded" clause may be useful to clarify the scope of work if some operation, maintenance, and repair functions are already being performed by contract.
**********!

C.1 GENERAL INTENTION. It is the intention of this solicitation to obtain maintenance and repair services for the central heating plant and distribution systems at !INSERT NAME OF ACTIVITY! by means of a combination fixed-price and indefinite quantity contract.

C.2 GENERAL REQUIREMENTS. The Contractor shall furnish all labor, supervision, tools, materials, equipment, incidental engineering, transportation, and management necessary to operate, maintain, and repair the central heating plant and associated distribution systems, facilities, and equipment in accordance with the requirements specified herein. (Attachments J-C1 and J-C2 describe the facilities and equipment to be maintained in this contract.) Work includes the performance of service work, preventive maintenance of equipment, and other services as described herein.

!**********
NOTE TO SPECIFICATION WRITER: Unique functional terms should be added to the following list of definitions. Definitions not required should be deleted.
**********!

C.3 DEFINITIONS - TECHNICAL. As used throughout this contract, the following terms shall have the meaning set forth below. Additional definitions are in the "DEFINITIONS" clause in Section I.

a. Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that reference is made to this specification and the drawings accompanying this specification unless stated otherwise.

b. Where "as directed", "as required", "as permitted", "approval", "acceptance" or words of similar import are used, it shall be understood that direction, requirement, permission, approval, or acceptance of the ACO is intended unless stated otherwise.

c. Additional Material Handling. Time expended for loading materials from storage to truck; unloading materials to work area; moving materials to work area, moving materials from storage to job site; removing debris; and handling of materials during the job that is not included in the craft time standard. The above definition is a summary of the definition of "Additional Material Handling" as used in development of Engineered Performance Standards.

d. Administrative Contracting Officer (ACO). The individual designated by the Contracting Officer to administer the contract. Throughout this contract, the term ACO will be used to refer to the individual designated to administer

the contract or his/her designated representative. See the "DEFINITIONS" Clause, Section I.

e. Contractor. The term Contractor as used herein refers to both the prime Contractor and any subcontractors. The prime Contractor shall be responsible for insuring that his/her subcontractors comply with the provisions of this contract.

f. Contractor Representative. A foreman or superintendent assigned in accordance with the "CONTRACTOR EMPLOYEES" clause, Section H.

g. Craft Phase. The numbered chronological sequence in which a specific craft performs a job phase.

Job Phase	Craft Phase	Craft	Description
1	1	Carpenter	Fabricate and install frame for new wall
2	1	Electrician	Rough in electrical
3	2	Carpenter	Install sheet rock
4	2	Electrician	Trim out electrical
5	1	Painter	Paint new wall

h. Delay Allowances. Time expended for planning the work in the shop and at the job site; personal needs; balancing delays/waiting for other craftsmen; unavoidable delays; partial day influence; waiting for tools or material that should have been at the job site. The above definition is a summary of the definition of "Delay Allowances" as used in development of Engineered Performance Standards.

i. Direct Material Costs. The actual vendor invoice charges for materials used for performance of work under this contract. Direct material costs shall include transportation charges when such charges are included on the invoice by the vendor, as well as any discounts allowed for prompt payment.

j. Engineered Performance Standards (EPS). A job estimating system developed for the Department of Defense. EPS is the average time necessary for a qualified craftsman working at a normal pace, following acceptable trade methods, receiving capable supervision, and experiencing normal delays to perform defined amounts of work of a specified quality. EPS manuals are published under the following numbers by each military branch:

Navy: NAVFAC P 700 Series
Army: TB 420 Series
Air Force: AFM 85 Series

k. Facility. An establishment, structure, or assembly of units of equipment designated for a specific function.

l. Government Representative. The person(s) whom the ACO will designate by name and/or position title to conduct liaison between the Contractor and the ACO on matters pertinent to this contract and be his/her authorized representative.

m. Job Phase. The numbered chronological sequence in which work is accomplished regardless of the craft(s) involved. (See Craft Phase above).

n. Job Preparation. All work and costs associated with receiving and considering a job assignment and instructions; planning equipment and material requirements; obtaining proper tools; laying out tools, material, and equipment; setting up ready to begin work; cleaning and storing tools and equipment; and cleanup of job site.

!**********
NOTE TO SPECIFICATION WRITER: The following definition assumes that no Government furnished facilities (which are located in EPS travel zone zero) are to be provided for the Contractor's use. If such facilities are provided the user should consider deleting the words "for travel" in the third sentence.
**********!

o. Labor Hour Unit Price. A labor hour unit price is the unit price bid by the Contractor to provide one EPS hour of work-in-place. The unit price bid includes all direct and indirect costs associated with performing an EPS hour of work. The unit price would typically include the Contractor's hourly craft wage, adjusted to allow for the bidder's workforce productivity (i.e., the Contractor's estimate of how his/her workforce will perform in relation to Engineered Performance Standards); and all costs for travel, pre-expended bin materials and supplies, ordering and stockpiling job material, profit, tools, equipment, field and home office overhead, clerical support, supervision, inspection, fees, taxes, licenses, permits, insurance, etc. In short, all costs associated with providing a specific EPS hour of effort.

p. Latent Defects. Latent defects are defects that are present in a hidden or undeveloped state and are not visible or apparent at the time of inspection, but which become obvious or come into being at some future time.

q. Pre-expended bin materials and supplies. The minor materials and supplies, including those that are incidental to the job, for which the total direct cost of any one material line item shown on the material estimate is $10.00 or less. Examples of pre-expended bin materials and supplies include, but are not limited to, solder, lead, flux, electrical connectors, electrical tape, fuses, nails, screws, bolts, nuts, washers, spacers, masking tape, sand paper, solvent, cleaners, lubricants, grease, oil, rags, mops, glue, epoxy, spackling compound, joint tape, gases, refrigerants, refrigeration fittings, plumbers tape and compound, clips, welding rods, heat sinks, electrical outlet, switches, cover plates, plumbing fixtures and fittings, touch up paint, and any other item for which the total line item adjusted cost is $10.00 or less.

r. Quality Assurance (QA). A method used by the Government to provide some measure of control over the quality of purchased goods and services received.

s. Quality Assurance Evaluator (QAE). The Government employee responsible for the daily monitoring of Contractor performance.

t. Quality Control (QC). A method used by the Contractor to control the quality of goods and services produced.

u. Regular Working Hours. The Government's regular working hours are from !STARTING HOUR! to !ENDING HOUR!, Mondays through Fridays except (a) Federal Holidays and (b) other days specifically designated by the ACO.

v. Repair. Repair is the restoration of a piece of equipment, a system, or a facility to such condition that it may be effectively utilized for its designated purposes. Repair may be overhaul, reprocessing, or replacement of constituent parts or materials that have deteriorated by action of the elements or usage and have not been corrected through maintenance.

w. Response Time. Response time is defined as the time allowed the Contractor after initial notification of a work requirement to be physically on the premises at the work site with appropriate tools, equipment, and materials, ready to perform the work required. Response times are designated in the appropriate technical clauses in Section C.

x. Travel Time. Time expended between shop and the job site; waiting for vehicle; getting in and out of vehicle; loading and carrying a tool box; vehicle travel; unloading, walking from vehicle to job site; opening and closing door; walking up and down stairs; using elevators; and access to secure or controlled areas.

y. Work Content Comparison. Work content comparison is a method of comparing a task that is not specifically defined in EPS Task Time Standards to a very similar task that is defined in the EPS Task Time Standards. This definition is a summary of a more detailed definition which appears on page 29 of EPS Planner and Estimator's Deskguide (NAVFAC P-701.0).

C.4 GOVERNMENT FURNISHED PROPERTY AND SERVICES

!**********
NOTE TO SPECIFICATION WRITER: Government furnished property may include real property or personal property. The specification writer must clearly identify Government Furnished Facilities, Government Furnished Equipment (GFE), and Government Furnished Material (GFM). The following clauses should be modified as needed to fit the activity's specific situation and needs. If no facilities will be provided, the OPTIONAL clause should be used. Remember that if a CA program study is being conducted, decisions on whether or not to provide Government furnished facilities and equipment must be based on an economic analysis. Refer to OPNAVINST 4860.7B.
**********!

a. Government Furnished Facilities

!SELECT EITHER (1) OR (2):!

(1) The Government will furnish or make available to the Contractor the facilities described in Attachment J-C3. The Contractor shall assume responsibility and accountability of such facilities provided for his/her use and shall take adequate precautions to prevent fire hazards, odors and vermin. Janitorial services for Government furnished facilities shall be the responsibility of the Contractor. The Contractor shall obtain written approval from the ACO prior to making any modifications or alterations to the facilities. Any such modifications or alterations approved by the Government will be made at the expense of the Contractor. At the completion of the contract, all facilities shall be returned to the Government in the same condition as

received, except for reasonable wear and tear. The Contractor shall be held responsible for the cost of any repairs caused by negligence or abuse on his/her part, or on the part of his/her employees.

(2) The Government will not provide office space and operational facilities to the Contractor. The Contractor shall secure and maintain the necessary office space and other facilities required for the performance of this contract at his/her own expense.

!**********!

NOTE TO SPECIFICATION WRITER: The specification writer must determine what equipment and material will be provided to the Contractor and select from the following paragraphs as appropriate. Equipment and material should normally not be provided to the Contractor unless economically justified under a CA program study. Extensive equipment listings should be placed in Attachment J-C4, including identification number, age, location, size or capacity, etc. Specific maintenance requirements beyond the general requirements of this clause should also be detailed in this Attachment. If equipment is located at other than job site or Government furnished facilities, specify location and responsibility for transportation. If no equipment or material will be provided to the Contractor, the OPTIONAL clause should be used.

**********!

b. Government Furnished Equipment

!SELECT EITHER (1) OR (2):!

(1) The Government will provide the Contractor the use of existing and available Government owned tools and equipment in the performance of the contract.

(a) Such Government furnished tools and equipment are listed in Attachment J-C4. The Contractor shall provide periodic servicing, maintenance and repair of the equipment listed at no cost to the Government, and the total or partial breakdown or failure of the Government furnished equipment shall not relieve the Contractor of the requirement to fully perform the work of the contract. Upon completion or termination of the contract, all Government owned equipment shall be returned to the Government in the same condition as received, except for normal wear and tear. Equipment which becomes worn out due to normal wear and tear shall be returned to the Government and its replacement shall be the responsibility of the Contractor at no cost to the Government. Equipment so acquired shall remain the property of the Contractor. The Contractor shall be responsible for the cost of any repairs or replacement caused by negligence or abuse by the Contractor or his/her employees.

(b) The Contractor and the ACO shall conduct a joint inventory before commencing work under this contract to determine the exact number and serviceability of Government furnished equipment. The Contractor shall then certify the findings of this inventory, assume accounting responsibility, and subsequently report inventory discrepancies to the Government Representative. Government furnished equipment shall not be removed from the military base unless approved by the ACO in writing.

(2) The Contractor shall furnish all tools and equipment required for the performance of this contract. The Government will not provide tools or equipment to the Contractor.

c. Government Furnished Material

!SELECT EITHER (1), (2), OR (3):!

(1) The Government will furnish the material described in Attachment J-C5 to the Contractor on a one time basis for use only in connection with this contract. The use of Government furnished material for any other purpose is prohibited. The Contractor and the Government Representative shall conduct a joint inventory before commencing work under this contract to determine the exact number and serviceability of Government furnished materials. The Contractor shall then certify the findings of this inventory, assume accounting responsibility for all materials supplied, and shall provide documentation supporting issue/use of such material. Upon depletion of material provided to the Contractor by the Government, the Contractor shall furnish all material to perform the work of the contract, except as otherwise specified herein. Upon completion or termination of this contract a second joint inventory shall be conducted, if necessary, of all unused Government furnished materials. The Contractor shall be held liable for all materials which cannot be accounted for by issue/use documentation.

(2) The Government will not provide any materials to the Contractor.

(3) The Government will furnish the material described in Attachment J-C5 to the Contractor on a one time basis for use only in connection with this contract. The use of Government furnished material for any other purpose is prohibited. The Contractor and the Government Representative shall conduct a joint inventory before commencing work under this contract to determine the exact number and serviceability of Government furnished materials. The Contractor shall then certify the findings of this inventory, assume accounting responsibility for all materials supplied, and shall provide documentation supporting issue/use of such material.

(a) Upon depletion of material provided to the Contractor by the Government, as listed in Part A of Attachment J-C5, the Contractor shall furnish all material to perform the work of the contract, except as otherwise specified herein. Upon completion or termination of this contract a second joint inventory shall be conducted, if necessary, of all unused Government furnished materials, as listed in Part A of Attachment J-C5. The Contractor shall be held liable for all materials missing which cannot be accounted for by issue/use documentation.

(b) Experience has shown that selected items of long lead time parts and materials must be stocked to insure repair of critical equipment in the event of failure. A list of these insurance items and minimum stocking levels are contained in Part B of Attachment J-C5. The Government shall provide the Contractor all items in at least the minimum quantities listed in Part B of Attachment J-C5. The Contractor shall maintain at least the minimum quantity of all the items specified. These items will be used by the Contractor in the maintenance and repair of the facilities/systems only as follows:

1 Insurance items shall be used on the systems, facilities, or GFE with which they are associated.

2 A replacement insurance item shall be ordered within 3 working days after the use of any insurance item which causes the total quantity

on hand to fall below the minimum specified level. The Contractor shall bear the cost of replacement of all insurance items.

3 Upon completion or termination of the contract, all insurance items shall be returned to the Government in the minimum specified quantities.

d. Availability of Utilities. The Government will furnish the following utility services at existing outlets, for use in those facilities provided by the Government and as may be required for the work to be performed under the contract: electricity, steam, natural gas, fresh water, sewage service, and refuse collection. Information concerning the location of existing outlets may be obtained from the ACO. The Contractor shall provide and maintain, at his/her expense, the necessary service lines from existing Government outlets to the site of work.

!SELECT EITHER (1) OR (2):!

(1) Utilities specified above will be furnished at no cost to the Contractor.

(2) The Contractor shall pay for utilities consumed and shall, at his/her expense, install meters as required by the ACO to measure consumption of utilities provided by the Government. Rates for reimbursement to the Government of metered utilities will be: !LIST THE RATES OF REIMBURSEMENT PER TYPE OF SERVICE PROVIDED!

A restricted telephone line (USOC Class RS4) for on base calls will be provided by the Government at no cost to the Contractor. The Contractor shall install commercial telephone service, and all service and toll charges shall be paid for by the Contractor.

C.5 CONTRACTOR FURNISHED ITEMS. Except for the items listed in clause C.4 the Contractor shall provide all equipment, materials, and services to perform the requirements of this contract. The Contractor shall provide new or factory reconditioned parts and components when providing maintenance and repair services as described herein. All replacement units, parts, components, and materials to be used in the maintenance, repair, and alteration of facilities and equipment shall be compatible with that existing equipment on which it is to be used; shall be of equal or better quality as original equipment specifications; shall conform to the applicable specifications listed in Attachment J-H1 and the technical specifications, Section C; and used in accordance with original design and manufacturer intent. Items not listed in Attachment J-H1 or technical specifications shall be of acceptable industrial grade and quality. If the original manufacturer has updated the quality of parts for current production, parts supplied under this contract shall equal or exceed the updated quality. The Contractor shall retain the parts replaced for at least 10 days after completion of the job and make these parts readily available for inspection by the ACO upon request. When disputes arise concerning material, equipment, and components selected for work items already accomplished, the Contractor shall, at no cost to the Government, remove, replace, and/or rework material, equipment, and components so that compliance with the Government’s requirements are satisfied. The resolution of formal disputes is addressed in the "DISPUTES" clause, Section I.

C.6 WORK OUTSIDE REGULAR HOURS. Except as may otherwise be specified, all work shall be performed during regular hours. If the Contractor desires to carry on

work on Saturday, Sunday, holidays, or outside regular business hours, he/she may submit application to the ACO for approval.

C.7 MANAGEMENT. The Contractor shall manage the total work effort associated with the operations, maintenance, repair, and all other services required herein to assure fully adequate and timely completion of these services. Included in this function will be a full range of management duties including, but not limited to, planning, scheduling, cost accounting, report preparation, establishing and maintaining records and inventories, and quality control. The Contractor shall provide an adequate staff of personnel with the necessary management expertise to assure the performance of the work in accordance with sound and efficient management practices.

a. Work Control. The Contractor shall implement all necessary work control procedures to ensure timely accomplishment of work requirements, as well as to permit tracking of work in progress. The Contractor is responsible for planning and scheduling work to assure material, labor, and equipment are available to complete work requirements within the specified time limits and in conformance with the quality standards established herein. Verbal scheduling and status reports shall be provided when requested by the ACO. The status of any item of work must be provided within !INSERT! hours of the inquiry during normal working hours, and within !INSERT! hours after normal working hours. Submit monthly workload plan to the ACO by the 25th of each month.

b. The Contractor shall schedule and arrange work so as to cause the least interference with the normal occurrence of Government business and mission. In those cases where some interference may be essentially unavoidable, the Contractor shall to make every effort to minimize the impact of the interference, inconvenience, equipment downtime, interrupted service, customer discomfort, etc.

!**********
NOTE TO SPECIFICATION WRITER: Reports and information which the Government periodically needs from the Contractor, as well as any required cost accounting reports, should be listed in Attachment J-C6. Report formats, required information, etc. should be discussed in detail in this attachment.
**********!

c. Records and Reports. The Contractor shall maintain management, operation, and maintenance records and prepare management, operation, and maintenance reports as set forth in Attachment J-C6, "LIST OF REQUIRED RECORDS AND REPORTS". This Attachment delineates which records and reports are the Contractor’s responsibility and those for which the Contractor must provide data to be used by the Government Representative in preparation of Government reports. All records and copies of reports shall be turned over to the ACO within five days after contract completion.

C.8 CONTINUITY OF SERVICES. To ensure continuity of essential services, the successful bidder shall be prepared to fully commence work on the start date of this contract, and should not assume that Government or previous Contractor employees will be available to guide, direct, or specifically orientate each Contractor employee.

C.9 HISTORICAL DATA. Attachment J-C7 contains historical data taken from the activity’s records. This information is provided to indicate the types and approximate order of magnitude of the work to be accomplished under the

contract. It is not, however, by itself, considered sufficiently accurate for bidding purposes.

C.10 FACILITY HISTORY FILES. A facility history file for each facility shall be maintained by the Contractor. Each file shall contain a copy of all work accomplished by the Contractor in each facility on equipment/components, and preventive maintenance inspection reports. A copy of all work authorizations completed by the Contractor and/or issued by the ACO shall be included in the file along with a list of Government owned equipment. The Contractor shall maintain all warranty information and inventories complete with serial numbers in this file. The Government shall require access to these files and they shall be available for periodic review. All documents shall be filed within ten days of the completed transaction. These files shall become the property of the Government at the termination of this contract.

C.11 REFERENCES AND TECHNICAL DOCUMENTS. Publications and other pertinent documents referenced in this specification are indicated in Attachment J-H1. If available, Navy publications will be furnished by the Government at the start of the contract. All available heating system drawings, records, manufacturer's equipment manuals, equipment history files, and other available pertinent data shall be turned over to the Contractor. The Contractor shall update these items to reflect all changes implemented during the contract period. Upon completion of the contract, the Contractor shall return all items in the same condition as received less normal wear and tear.

C.12 SERVICE CALLS. Service calls are defined as maintenance and repair or other miscellaneous work requirements which require not more than !INSERT NUMBER! estimated total labor hours for accomplishment and not more than !INSERT DOLLAR VALUE! in total direct material cost, to include parts or entire unit replacement. All service work is included in the fixed-price portion of the contract. When questions arise concerning the labor hours required for a particular job, labor hour requirements will be based on EPS Manuals (NAVFAC P-700 series) or, if not applicable, other estimating sources. When questions arise concerning the cost of materials, material costs will be based on the lowest of quotes provided by the Contractor from at least three different commercial vendors for the actual direct cost of materials. The Government retains the right to obtain additional quotes in questionable situations. The lowest price will be used.

a. Service Call Reception

(1) Normal Working Hours. The Government's work control center will receive service call requests during normal working hours and classify each call in accordance with the definitions provided below. A description of the problem or requested work will be placed on an Emergency/Service Work Authorization form and made available for pickup by the Contractor in the work control center. If the call is classified as emergency, the Government's work receptionist will notify the Contractor by phone that a call has been received and that the work authorization form is available for pickup. Emergency calls shall be considered as received by the Contractor at the time and date that this telephone is made.

(2) After Normal Working Hours. The Contractor shall receive and respond accordingly to all service call requests from authorized Government representatives after normal working hours, on weekends, and holidays. If the call is classified as emergency or urgent, the Contractor shall fill out a Service Call Work Authorization form, including order number, description of the

problem, date and time received, and caller's name and telephone number. If the call is classified as routine, the Contractor shall record the same information, but will not fill out a work authorization form. One copy of each emergency and urgent work authorization form and a log of all routine calls received shall be delivered to the Government's work reception center by !INSERT TIME! the next regular working day.

b. Service Call Classification

(1) Emergency Calls. Service calls shall be classified as emergency calls when the work consists of correcting failures which constitute an immediate danger to personnel or property. The Contractor shall respond to emergency service calls within !INSERT! minutes during normal working hours and within !INSERT! hours after normal working hours, on weekends, or on holidays. The Contractor shall respond and arrest the emergency condition before departing the job site. If further labor and material is required to complete the repair, completion shall be in accordance with a routine service call (5 days for completion) or by minor work order if beyond the limitations of a service call.

(2) Urgent Calls. Service calls shall be classified as urgent calls when the work consists of failures in services which do not immediately endanger personnel or property, but would soon inconvenience and affect the health or well being of personnel or disrupt operational missions. The Contractor shall complete urgent service calls within !INSERT! working days of receipt. Urgent calls shall normally be accomplished during normal working hours, Monday through Friday.

(3) Routine Calls. Service calls shall be classified as routine calls when the work does not qualify as an emergency or urgent call. Routine calls shall be completed within five (5) working days after receipt of the call. Routine calls shall normally be accomplished during normal working hours, Monday through Friday.

c. The Contractor shall have adequate procedures for picking up service call work authorizations from the Government's work reception center during normal working hours, and for receiving and responding to emergency and urgent service calls 24 hours per day, including weekends and during holidays. A single local telephone number shall be provided by the Contractor for receiving all service calls.

!**********
NOTE TO SPECIFICATION WRITER: The $2,000 limit specified in the following clause assumes that Davis-Bacon wage provisions have not been included in the contract. See the User's Guide for a more detailed discussion of the $2,000 limit.
****

C.13 MINOR MAINTENANCE AND REPAIR. Minor work is defined as maintenance and repair work requirements which are beyond the scope of service work (as defined in clause C.12). The cost of any single instance of minor maintenance or repair is limited to a total cost (labor and material) of $2,000. All minor work is included in the indefinite quantity portion of the contract. The Contractor will be paid a negotiated fixed-price for each delivery order for minor work as specified in the following procedures. Labor, material, and equipment required for the unit priced tasks listed in the Schedule of Indefinite Quantity Work-Unit Priced Tasks is included in the bid prices. Material and equipment

required for work based on the Schedule of Indefinite Quantity Work-EPS Hour Labor will be reimbursed in accordance with the "ESTIMATES" clause below.

a. Urgent Minor Work. The Government will classify up to !INSERT%! of the delivery orders for minor work as urgent. The Contractor shall complete all urgent minor delivery orders within !INSERT! calendar days of receipt. Urgent minor work shall normally be performed only during normal working hours except that after hours and/or weekend work may be authorized by the ACO if required to complete work within the time requirement specified above.

b. Routine Minor Work. All non urgent minor work will be classified as routine minor work. Routine minor work will be further classified by the Government as one of two different "Types". Delivery orders for Type I routine minor work shall be completed within !INSERT! calendar days of receipt and Type II delivery orders within !INSERT! calendar days of receipt. No more than !INSERT%! of the delivery orders for routine minor work will be classified as Type I.

c. Establishing Final Cost for Minor Maintenance and Repair Work. On receipt of a proposed delivery order from the ACO, the Contractor shall prepare an estimate following the procedures outlined in the "ESTIMATES" clause elsewhere in this Section. The Contractor’s estimate will be evaluated to determine if: (1) the scope has been clearly and accurately identified, (2) the EPS standards (including work content comparison) have been accurately applied, (3) work which is not covered by EPS has been properly estimated with supporting data presented, (4) equipment and material estimates are reasonable and properly documented, and (5) unit price work has been estimated using the unit prices that were bid. After the estimate has been reviewed and there are no mathematical, typographical, scope or estimating errors, the ACO will approve the estimate. The approved estimate then shall be a fixed-price for the work described in the delivery order.

d. Ordering Minor Maintenance and Repair Work. The ACO will order minor maintenance and repair work by issuing to the Contractor a copy of the approved estimate and a delivery order for the work covered by the approved estimate in accordance with the "ORDERING OF WORK" clause in Section G.

e. Changes to Scope of Work in Delivery Orders. If during the course of work the Contractor encounters unforeseen conditions which impact the work and which could not be evaluated during the initial estimating procedures, the Contractor shall not proceed without ACO authorization. The ACO will direct the Contractor to (1) estimate the change of scope for the unforeseen condition only, or (2) prepare a new estimate for the total job as revised. The ACO will, after review and approval of the estimate, (1) issue a delivery order for the change of scope only, or (2) cancel the original delivery order and issue a new delivery order for the total job as revised.

C.14 ESTIMATES. Detailed estimates for proposed minor work orders shall be prepared when requested in writing by ACO. Completed detailed estimates shall be provided to the Government’s work control center within !INSERT! calendar days after receipt of the proposed work order for urgent minor work, and within !INSERT! calendar days after receipt for routine minor work. After approval by the ACO, the detailed estimate will form the basis of payment for the work. The cost of preparation of estimates is included in the fixed-price portion of the contract.

a. EPS Manuals. EPS manuals will be made available for examination at !INSERT LOCATION AT THE ACTIVITY WHERE THE WORK WILL BE PERFORMED AND THE CONTRACTS OFFICE AT WHICH THE BIDS WILL BE RECEIVED! and at Naval Facilities Engineering Command Engineering Field Divisions during the bidding period of this contract. !INSERT NUMBER! copies of the EPS manuals will be provided to the successful bidder upon award.

b. Travel Zone Maps. The Travel Zone map for !INSERT ACTIVITY! is provided as Attachment J-C8 and is to be used in conjunction with historical data to evaluate travel time impact.

c. Preparation of Estimates. The Government will provide the Contractor a detailed scope of work for which the Contractor shall prepare an independent estimate of the labor, equipment, and material required to complete the work ordered under the "MINOR MAINTENANCE AND REPAIR" clause. The detailed scope of work will be provided by the Government on the DD Form 2167, Job Phase Calculation Sheet, and will identify the overall work scope for each craft phase and the specific task descriptions. The Contractor shall complete the total estimate by entering the EPS craft time for each task description and applying the EPS nomograph to arrive at the total EPS time for each job phase. If required, the Contractor shall identify on the DD Form 2167 additional task descriptions that are necessary to satisfactorily accomplish the overall work scope for the particular craft phases and provide appropriate EPS task references and estimated EPS hours. Any portions of delivery orders that have been bid as unit priced tasks shall be priced using the unit prices bid instead of EPS. EPS does not cover every task that might be accomplished by specific crafts. For tasks not exactly identified in EPS manuals, work content comparison shall be performed prior to a determination that EPS does not apply to a job. Estimates and all supporting information, documentation, and calculations shall be submitted to the ACO.

!**********
NOTE TO SPECIFICATION WRITER: The following paragraph assumes that no Government furnished facilities (which are located in EPS travel zone zero) are to be provided for the Contractor's use. If such facilities are to be provided, the user should consider deleting the sentence "The standard allowance for travel...the EPS nomograph".
**********!

(1) Labor Estimates. Labor estimates shall be expressed in EPS hours. Craft time shall be taken from the EPS task time standards or the craft spread sheets either directly or by work content comparison, applicable additional task times (additional material handling, additional travel, and additional preparation) shall be added, and total craft time applied to the EPS nomograph to add standard allowances for job preparation, craft delays, and partial day influence. The standard allowance for travel time will **not** be added, and travel zone 0 (shop) will be used when applying total craft time to the EPS nomograph. No other allowances, mark-ups, or add-ons for work time associated with union agreements, overhead, profit, material markups, supervision, or clerical support shall be added to the labor hour estimate. The estimate shall include job phasing and craft phasing, and the task time standard(s) or spread sheet used in the estimate shall be identified. For multiple craft jobs, a phasing summary sheet shall be prepared. DD Form 2167 (1 Nov 78) shall be completed as required.

(a) Estimating Work Not Covered by EPS. The Contractor shall clearly identify work that cannot be estimated either directly from EPS or using EPS work content comparison procedures. Such conventional labor hour estimates shall be based on the total labor hours required for the specific task(s). The Contractor shall submit all back up sheets with the estimate including a listing of all operations and supporting data for all estimates based on historical information. Estimates will be for labor hours only and shall not include any mark-ups, allowances, or add-ons for work time associated with union agreements, overhead, profit, material markups, supervision, or clerical support.

(b) Total Labor Cost Estimates. The total labor cost estimate will be determined by totaling the number of EPS estimated labor hours for each craft (trade) and then multiplying by the appropriate hourly unit price from the Schedule of Indefinite Quantity - EPS Hour Labor. This procedure shall be followed for each craft required to perform the job. The total for all crafts is the total labor cost estimate.

(2) Material Estimates. Material estimates shall include a detailed bill of materials establishing the size, quality, number of units, and unit prices. Material prices shall be the lowest price available considering the availability of materials and the time constraints of the job. The direct material price shall be reduced by all discounts and rebates for core value or salvage value that accrue to the Contractor. Pre-expended bin supplies and materials shall not be included in the material estimate unless the total cost of the pre-expended bin items exceeds $_____ per delivery order. Contractor administrative and handling costs for acquiring material, and any Contractor material markups should be included in the prices bid for an EPS estimated labor hour.

(3) Construction and Weight Handling Equipment Estimates. Estimates for construction and weight handling equipment may be added for an individual job if not included in other portions of the contract or not provided by the Government. Estimates shall include a detailed price list stating size, capacities, quality, number of units, and unit prices.

(a) Rental equipment shall be based on the lowest price available considering the availability and time constraints of the job.

(b) When the equipment to be used is owned by the Contractor, the cost shall be based on the U.S. Army Corps of Engineers Construction Equipment Ownership and Operating Expense Schedule EP 1110-1-8.

(c) Cost for equipment operators, when separate operators are required, shall be estimated on a EPS unit hour basis, unless operator cost is included in equipment rental price or operator has been provided by the Government. Any overhead expense associated with equipment usage shall be included in the Contractor’s bid for the applicable EPS labor hour unit price.

C.15 HEATING PLANT OPERATION, MAINTENANCE, AND REPAIR. The Contractor shall be responsible for the effective and efficient operation, maintenance, and repair of the central !SIZE! MBtu/hr heating system 24 hours per day, 7 days per week. This system includes the boilers, plant, and related equipment including fuel storage and handling, water treatment equipment, associated pumps, components, controls, the steam distribution system including steam lines, condensate return pumps, and related equipment as identified in the Attachment J-C1.

a. Plant Operation. Operation of the central heating plant includes the start-up and shutdown of heating equipment, operator maintenance and inspection, and the efficient and economical production of steam to assure its availability to the Government at the lowest possible cost. This work also includes record keeping of operations and conditions, analysis of records to correct non-optimal practices, water treatment, monitoring warranties, testing operations and capabilities of the central heating plant, periodic operation and inspection of idle equipment, purchasing of supplies other than fuel, and cleaning, preservation, lubrication, and adjustment of plant equipment.

(1) Operation Procedures. The Contractor shall maintain complete control of the heating plant operation by preparation and adherence to written operating procedures. The operating procedures shall be prepared by the Contractor in accordance with the following, in order of precedence: (1) manufacturer's instructions, (2) industry standards and national codes, and (3) procedures outlined in NAVFAC publications MO-205, MO-321, and MO-322. As a minimum the procedures shall include:

!**********
NOTE TO SPECIFICATION WRITER: If operating and maintenance instructions, plans, etc., are in existence/current use, these should be made available to the Contractor and so specified in the contract.
**********!

(a) Plant systems (boilers, etc.) operating instructions including a detailed description in correct sequence of the observations and adjustments to be made, the minimum frequency of the observations and adjustments, and who shall perform them.

(b) Plant equipment operating schedule.

(c) Boiler water treatment plan.

(d) Systems maintenance and inspection.

(e) Emergency procedures for steam production/distribution disruptions.

(f) Safety/accident procedures.

(g) Boiler overhaul.

(2) These procedures shall be submitted to the ACO for approval within fifteen days after contract award. The approved procedures shall be instituted upon commencement of contract operations. The Contractor shall update and revise all plant operation, distribution, and maintenance procedures on a continuing basis as required by physical or operational changes at no additional cost. If physical or operational changes result in a change in the cost of providing services, an adjustment will be made to the contract price in accordance with the "CHANGES" clause, Section I.

(3) Steam Generation. The central heating system shall be operated continuously to meet industrial/production and heating demand requirements. The steam pressure shall be maintained at a minimum of !SPECIFY PRESSURE/TEMPERATURE PSIG/°F)!

b. Fuel Oil. The Government shall furnish fuel oil for boiler operation. The Contractor shall report !SPECIFY FREQUENCY! to the ACO the amount of usable fuel available for the plant. The Contractor shall maintain an accurate record of the amount of fuel received in each delivery. Tank soundings shall be taken and recorded before and after fuel delivery to verify quantities received. The Contractor shall initiate fuel orders as directed by the ACO, receive fuel from tanker trucks, transfer to and among storage tanks, and make all operational fuel transfers. The Contractor shall maintain all fuel oil handling equipment including storage tanks, pumps, piping, and heaters, and shall comply with all federal regulations pertaining to fuel operations.

c. Water Testing and Treatment. At least once during each day that the plant is in operation the Contractor shall collect feedwater, boiler water, and condensate samples from each operating boiler for testing. The Contractor shall perform or have performed the necessary tests to meet applicable manufacturer requirements or local requirements on hardness, phosphate, sulfite, causticity (alkalinity as OH), pH, and total dissolved solids. !SPECIFY, SUCH AS MONTHLY! a water analysis report shall be forwarded to the ACO and !INSERT NAME OF GEOGRAPHIC EFD!. The Contractor shall provide all water treatment chemicals required for plant operations. Boiler water shall be maintained within the following limits: Phosphate _____, Sulfite _____, pH ___ to ___, hardness _____, causticity (alkalinity as OH) _____, total dissolved solids _____. Changes in approved water treatment plan must be approved by the ACO. At no additional cost to the Government, the ACO has the option of requiring sampling and testing once per shift, specifying the time(s) the samples are taken, observing the sampling taking, and directing that the samples be analyzed by an independent laboratory.

d. Operation Efficiency Standards. The Contractor shall be responsible for meeting the present operating standard of the heating plant. This shall be based on present efficiency of the boilers. Boiler efficiency shall be calculated by the ASME input/output method. For boilers not equipped with instrumentation that permits the determination of thermal efficiency by the input/output method, exit flue gas temperatures shall be used as an indicator of the boiler efficiency. Each monthly average 50 degree Fahrenheit increment increase in exit gas temperature above the base temperature shall be equated to a 1 percent decrease in boiler efficiency for the month. The procedure for determining the efficiency used in the calculation shall be consistent throughout the term of the contract. The minimum acceptable boiler efficiency shall be !INSERT%! or the maximum exit gas temperature shall be !INSERT! degrees Fahrenheit. These standards are subject to revision based on changes in future operational conditions of the boiler plant. For example, improvements in the boiler plant that are accomplished at Government expense may require an increase in minimum acceptable efficiency.

e. Plant Reports and Logs. The Contractor shall maintain operating logs on all operating equipment which will note operator checks and adjustments, and a record file noting normal or abnormal operating conditions, deficiencies or malfunctions, and corrective action taken. All recording charts and required logs shall be filed chronologically and kept in the location(s) as designed by the ACO. This information shall be readily available for inspection at all times. A copy of the logs shall be submitted to the ACO !SPECIFY FREQUENCY!. The format and specific data required for logs and reports are indicated in Attachment J-C6.

(1) The Contractor shall be able to separately identify the operational and maintenance costs for both PLANT and SYSTEMS to allow development of the UTILITIES COST ANALYSIS REPORT (NV 2127) by the Government. The Contractor shall report quantitative data for all utilities on the UTILITIES FEEDER DATA REPORT (NC 2126). A copy of this report is provided in Attachment J-C6.

(2) Boiler Performance Report

(a) A boiler performance report will be prepared for each operating boiler on a weekly basis. The boiler performance report will include:

1 A plot of boiler combustion efficiency versus boiler load.

2 A plot of the temperature difference between the boiler water and exit gas temperature versus load for steam boilers.

3 A plot of temperature difference between the boiler feedwater and exit gas temperature versus load for hot water generators.

(b) Plots of combustion efficiency and temperature difference versus load should be reported for the full range of operating loads each week. Typical plots are shown in the sample Boiler Performance Report in Attachment J-C6.

(c) Combustion efficiency can be obtained by direct measurement using a combustion analyzer. Combustion efficiency can also be obtained by measuring boiler intake air temperature, exhaust gas temperature, and CO_2 or O_2, and finding the combustion efficiency on charts for the particular fuel being fired. If measured combustion efficiencies are more than three percent (3%) below the optimum combustion efficiencies, corrective action is required.

(d) Water and flue gas temperature difference is an indicator of the cleanliness of the boiler watersides and firesides. A plot of this temperature difference shall be prepared by the Contractor after the boiler watersides and firesides have been cleaned. If the temperature difference rises by more than 80 degrees at several load points, deposits have probably formed and should be removed. As a check, combustion efficiency should drop as the temperature difference rises.

f. Operational Emergencies. Operational emergencies such as ruptured mains, loss of boilers, etc., which reduce boiler pressure below 80 percent of normal operating pressure for a period extending beyond 30 minutes or which result in a change in the plant's reliability or capacity shall be reported within thirty (30) minutes of occurrence to the ACO. The Contractor will identify the probable cause for the reduction and the estimated time to restore full steam capacity. If full capability cannot be restored within !INSERT! hours, the Contractor shall install and operate emergency steam generation equipment with a capacity of not less than !SPECIFY PRESSURE/TEMPERATURE PSIG/°F)!. Historically, emergency equipment has had to be employed !INSERT! times for approximately !INSERT! days over the past three years.

g. Plant Maintenance and Repair. The maintenance of the central boiler plant shall include steam heating sources; fuel storage and handling, feedwater, condensing, flue gas, and air system equipment; miscellaneous pumps and plant instrumentation; electrical equipment and components; as well as associated

appurtenances necessary to generate and deliver steam to the distribution system external to the plant. During boiler safety inspections and/or certifications conducted by the Government, the Contractor shall provide a qualified operator to standby. Plant maintenance shall be performed in accordance with the approved operating procedures as defined previously in this section. For any individual plant repair item, the Contractor is responsible to perform any work item requiring not more than 16 labor hours or $500 in direct material costs.

h. Calibration. The Contractor shall calibrate all pressure and temperature gauges annually and attach a self-adhesive seal on each instrument and gauge certifying that it has been calibrated. The date of the calibration and the initials of the person performing the calibration shall be noted on the sticker. The gauges/instruments shall be calibrated using a standard dead weight tester or a calibrated master gauge. In addition to the normal annual calibration, the Contractor shall recalibrate any gauge or instrument which is suspected of being in error.

i. Boiler Overhaul

(1) Maintenance work on boilers and direct support auxiliary equipment which cannot be performed while the boiler is in operation shall be accomplished as an overhaul item. Each boiler shall be overhauled at least !SPECIFY FREQUENCY!. The overhaul shall be performed in accordance with manufacturer recommendations and Section VII of the ASME Boiler and Pressure Vessel Code. All overhaul work shall be fully warranted against defects due to material or workmanship for a period of 180 days.

!**********
NOTE TO SPECIFICATION WRITER: Show the date of last overhaul, and the amount of downtime allowed to accomplish the overhaul. If there are several boilers, this information should be presented in an attachment.
**********!

(2) The Contractor shall prepare a boiler overhaul schedule indicating the time and duration of the shutdown, which shall be submitted to the ACO for approval. Within 15 days after completion of each overhaul, the Contractor shall prepare and submit a detailed report to the ACO of the findings and work accomplished. Work affecting the structural or pressure integrity of the boiler shall be performed only when directed by the ACO and in accordance with written procedures approved by the Government boiler inspector. Completed work will be inspected by the Government boiler inspector prior to returning the affected unit to operation.

(3) In conjunction with the overhaul, the Contractor shall perform an operational test of low water and other controls and alarms. The Contractor shall schedule the work with the ACO so that the Government Boiler Inspector may perform such inspections and witness tests that are required while the unit is open and before it is returned to service.

j. Certification

!**********
NOTE TO SPECIFICATION WRITER: At most Public Works Centers the certification of boilers and unfired pressure vessels is provided by Government Boiler Inspectors available either within the activity or from the EFD. If a Government Boiler Inspector is not available or the activity does not choose to utilize a

Government employee, the activity will have to obtain this service under separate contract from an independent source. In no case shall this function be obtained from the same Contractor who operates/maintains the steam generating plant and steam distribution systems. Suggested source would be a casualty insurance company.
**********!

(1) The Contractor shall clean and prepare the heating system boilers and unfired pressure vessels in the system for certification. The Contractor shall operate the boilers during the certification as approved by the Government inspector. Hydrostatic pressure testing for certification shall be performed by the Contractor.

(2) All boilers and unfired pressure vessels will be inspected and certified by the Government in accordance with NAVFAC MO-324. Units for which certification has been withheld will not be operated without the written concurrence of the ACO. Boiler inspection safety certificates shall be void immediately on the discovery of a safety deficiency regardless of the expiration date on the certificate. The certificate will again be valid only after the deficiency has been corrected by the Contractor and checked by the Government.

k. The preparation of boilers for temporary or extended standby shall be performed in accordance with NAVFAC MO-324.

C.16 STEAM DISTRIBUTION SYSTEM. The Contractor shall maintain and repair the steam distribution system identified in Attachment J-C2, which includes approximately !INSERT! linear feet of steam distribution lines and supporting equipment and components. The steam distribution system originates at the Central Plant and extends throughout the base to and including the pressure reducing valve (PRV) or the building shut off valve where there is no PRV. This system includes expansion joints, expansion loops, pipe anchors, valves, traps, insulation, conduit and manholes, structural supports, steam piping (above ground and underground), condensate return piping, and other related items. Seasonal start-ups and shut-downs of the heating distribution system shall be performed in accordance with NAVFAC publication MO-209.

!**********
NOTE TO SPECIFICATION WRITER: A minimum PM program should be included in Section J. PM procedures and frequencies should be identified.
**********!

a. Preventive Maintenance Report. The Contractor shall submit a typewritten PM report for all PMI within !INSERT! working days after the inspection. The frequency of inspection shall be in accordance with that defined in the PM plan (Attachment JC-9). The report shall identify all items inspected, condition, deficiencies, corrective work required including scheduled accomplishment dates, and estimates for all minor maintenance/repair work.

b. Preventive Maintenance Records. The Contractor shall maintain PM records for the steam distribution system. The PM records shall reflect PM performed including scheduled and accomplished dates. The Contractor shall update the PM records on a monthly basis within 10 days after the last day of the month. PM records are the property of the Government and shall be turned over to the ACO within !INSERT! days of the termination or close out of the contract. The Government shall be allowed to review any PM records upon request.

c. Repair Work. Repair work may be generated by PMI or service call. For any individual repair item, the Contractor is responsible to perform any work item requiring not more than !INSERT NUMBER! labor hours or !INSERT DOLLAR VALUE! material (Service Work). When it exceeds this limit, the work shall be processed as minor maintenance and repair work. After completing repairs to an area which affects the integrity of the steam system, the Contractor shall pressurize the system and check for leaks. If the repair is made to a buried section of the system, a pressure test shall be accomplished prior to covering the repaired area.

END OF SECTION C

PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

SECTION J: LIST OF ATTACHMENTS

TABLE OF CONTENTS

* !TO BE INSERTED BY ACTIVITY, IF REQUIRED!

ATTACHMENT J-1

WAGE DETERMINATION !INSERT NUMBER!

Attached is Wage Determination !INSERT NUMBER!. This determination specifies the minimum wages and fringe benefits to be paid under this contract.

ATTACHMENT J-C1

DESCRIPTION OF HEATING PLANT

!**********
NOTE TO SPECIFICATION WRITER: Describe in detail the combustion control system for boilers. Fuel higher heating value (HHV) should be obtained from EFD/NAVFAC for the particular type fuel used.
**********!

1. **BOILER HEATING PLANTS**

Building Number	Type Fuel	Fuel HHV	Type Boiler	Manufacturer	Model	Design Capacity	Design Pressure

!**********
NOTE TO SPECIFICATION WRITER: Major components should be listed here to give the Contractor some idea of equipment type, system complexity, capability, and condition. Include equipment as appropriate, i.e. pumps, feedwater deaeriator, tanks, fans, precipitators, baghouse, economizers, etc.
**********!

2. **BOILER HEATING PLANTS, MAJOR COMPONENTS, BY FACILITY**

Equipment	Size	Number	Manufacturer

!**********
NOTE TO SPECIFICATION WRITER: At least 12 months historical plant operational data should be listed as a minimum for each boiler plant.
**********!

3. **OPERATIONAL DATA**

Month/Yr	Total Steam Produced (lbs)	Total Steam Exported (lbs)	Fuel Used (gallons)	Make-Up Water (gallons)	Maximum Steam Demand (lbs/hr)
Dec 1987					
Jan 1988					
Feb 1988					
!ETC.!					

ATTACHMENT J-C2

DESCRIPTION OF HEATING DISTRIBUTION SYSTEMS

!**********
NOTE TO SPECIFICATION WRITER: Describe length of various pipe sizes, type of expansion joints, above ground conduit or direct burial, tunnel, trenches, number of facilities served, number of pumping stations, and any special problems such as flooding, etc.
**********!

Major Components	Description & Size	Location

ATTACHMENT J-C3

GOVERNMENT FURNISHED FACILITIES

!**********
NOTE TO SPECIFICATION WRITER: List all facilities that are to be provided to the Contractor. Provide descriptive characteristics and provide simple drawings of each facility showing Contractor areas, areas retained for use by the Government, etc.
**********!

The following facilities will be made available for use by the Contractor, as specified in clause C.4.

Building Number/Location	Square Feet	Description	
5/Naval Station	1,400	Office Space (1)	900 SF
		Lounge Area (1)	150 SF
		Rest Rooms (2)	200 SF
		Hallway, Stairs, etc.	150 SF
		TOTAL =	1,400 SF
114/Naval Station	2,000	Storage (3)	600 SF
		Rest Rooms (2)	200 SF
		Office Space (3)	1,200 SF
		TOTAL =	2,000 SF
2l2/Naval Station	250	Flammable Storage Locker	
65/Naval Station Annex	6,000	Material Storage Warehouse	

!ETC.!

ATTACHMENT J-C4

GOVERNMENT FURNISHED EQUIPMENT

!**********
NOTE TO SPECIFICATION WRITER: List all equipment that will be provided to the Contractor. Provide descriptive characteristics including manufacturer, model type, age, location, etc.
**********!

The following items of equipment will be made available for use by the Contractor, as specified in clause C.4.

Item	Model Number	Brand Name	Age	Location
10-Inch Grinder	011702	Schaver	15 years	Building 5

!ETC.!

ATTACHMENT J-C5

GOVERNMENT FURNISHED MATERIAL

!**********
NOTE TO SPECIFICATION WRITER: List all materials that are to be provided to the Contractor. Provide descriptive characteristics including generic name, federal specifications or commercial specifications, and quantities of issue. Indicate how it is to be provided to the Contractor, does he/she pick it up (where and when) or will the Government deliver it?
**********!

The following material will be made available for use by the Contractor, as specified in clause C.4.

PART A - ONE TIME ISSUE

Description	Approximate Quantity

PART B - INSURANCE ITEMS

Description	Approximate Quantity

ATTACHMENT J-C6

LIST OF REQUIRED RECORDS AND REPORTS

!**
NOTE TO SPECIFICATION WRITER: The format, frequency, and specific data to be reported and/or logged should be tailored by each activity in order to obtain the information it considers pertinent for the facilities and to enable the activity to periodically monitor that the Contractor's operations are within acceptable limits. Keep in mind that numerous reports and/or high frequency requirements cost more money. Reports should be minimized and formats designed to consolidate and provide the necessary information with minimal effort. The activity will have to receive sufficient data as necessary to allow preparation of the Utilities Cost Analysis Report, NAVCOMPT Form 2127. As a minimum it is recommended that the Contractor maintain a daily log for boiler operations, other auxiliary equipment/systems if part of the contract, a boiler water treatment log, maintenance log, and a fuel consumption and availability log. The minimum reports recommended would cover boiler operations including efficiencies, auxiliary equipment/systems if appropriate, utility inspections, fuel consumption/availability, boiler water tests/treatment, and maintenance/repair work. Attach typical data report forms and supporting information and instructions, as appropriate.
**!

1. Temperature and Pressure Records Forms
2. Plant Boiler Logs
3. Fuel Oil and/or Coal Receipt and Record Forms
4. Boiler Performance Report
5. Utilities Feeder Data Report (NC 2126) input data
6. Water Analysis Report
7. PM Inspection Report

ATTACHMENT J-C7

HISTORICAL DATA

The data in this attachment is taken from the activity's records and is provided to indicate the types and an approximate order of magnitude of the work to be accomplished under the contract. It is not, however, by itself, considered sufficiently accurate for bidding purposes.

SERVICE CALL DATA

NUMBER OF DISTRIBUTION SYSTEM SERVICE CALLS, l987

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

!INSERT APPROPRIATE NUMBER OF CALLS FOR EACH MONTH!

% of calls received after normal working hours = !INSERT!%

The Government utilized the various trades listed below in performing the service calls shown in the chart above. The percentage of the total number of service calls shown in which each trade was involved are also shown below. For example, electricians were involved in approximately !INSERT%! of the calls shown above. Some calls involved more than one trade.

Trade/Craft	Percent (%) Trade Involvement
Electrical	!INSERT!
Plumbing/Pipefitting	!INSERT!
Moving/Rigging	!INSERT!
Sheet Metal	!INSERT!
Machinist	!INSERT!
Labor	!INSERT!

MINOR MAINTENANCE AND REPAIR DATA

Craft	Number of Jobs[1]
Electrical	!INSERT!
Sheetmetal	!INSERT!
Machine	!INSERT!

[1] Craft involvement only; not total jobs.

TRAVEL ZONE

	1	2	3	4	5	6	7	TOTAL
# of jobs performed								
EPS hours								

Job Size (EPS hours)

	(0-l6)	(l7-40)	(4l-80)	(8l-l20)	(l2l-l60)
No. of jobs, FY-85					
No. of jobs, FY-86					

ATTACHMENT J-C8

ACTIVITY TRAVEL ZONE MAP

!**********

NOTE TO SPECIFICATION WRITER: Attach a legible copy of the activity's EPS travel zone map.

**********!

ATTACHMENT J-C9

PREVENTIVE MAINTENANCE INFORMATION ON STEAM DISTRIBUTION SYSTEM

!**********
NOTE TO SPECIFICATION WRITER: Add activity preventive maintenance plan pertaining to steam distribution systems, as discussed in clause C.16.
**********!

ATTACHMENT J-El

LIST OF ENGINEERED PERFORMANCE STANDARDS MANUALS

Publication Number	Name
P-700.0	EPS-Engineers Manual
P-701.0	EPS-General Handbook
P-702.0	EPS-Carpentry Handbook
P-703.0	EPS-Electrical Electronic Handbook
P-704.0	EPS-Heating, Cooling & Ventilation Handbook
P-705.0	EPS-Emergency/Service Handbook
P-706.0	Janitorial and Custodial Services Handbook
P-707.0	EPS-Machine Shop Machine Repairs Handbook
P-708.0	EPS-Masonry Handbook
P-709.0	Moving, Rigging Handbook
P-7l0.0	EPS-Paint Handbook
P-711.0	EPS-Pipefitting Plumbing Handbook
P-712.0	Roads, Grounds, Pest Control and Refuse Collection Handbook
P-7l3.0	EPS-Sheetmetal Structural Iron/Welding Handbook
P-714.0	Trackage Handbook
P-715.0	Wharfbuilding Handbook
P-716.0	Unit Price Standards (UPS) Handbook
P-717.0	Preventive/Recurring Maintenance Handbook

ATTACHMENT J-H1

PUBLICATIONS AND STANDARDS

!**
NOTE TO SPECIFICATION WRITER: List all directives, instructions, manuals, material specifications, etc. referred to by this specification.
**!

1. ADMINISTRATIVE PUBLICATIONS: OPM Handbook X-119

2. TECHNICAL PUBLICATIONS:

2.1 Navy Regulations and Manuals

NAVFACINST 11300.7E, Minimum Operator Attendance for Boiler Plants Utilizing Fully Automatic and Semiautomatic Controls

NAVFAC M0-205, Central Heating and Steam Electric Generating Plants (5 Volumes)

NAVFAC M0-209, Maintenance of Steam, Hot Water and Compressed Air Distribution System

NAVFAC M0-321, Maintenance Management of Public Works and Public Utilities

NAVFAC M0-322, Inspection for Maintenance of Public Works and Public Utilities (3 Volumes)

NAVFAC MO-324, Inspection and Certification of Boilers and Unfired Pressure Vessels

NAVFAC P-700 Series

2.2 Non-Government Standards

Manufacturer’s Instruction, Operational and Maintenance Manuals

Local Standard Operating Procedures for Heating and Distribution Systems

Other Equipment Manufacturer’s Literature !MODIFY TO MATCH EXISTING LOCAL AVAILABILITY!

Prevention, Control and Abatement of Air Pollution from Federal Government Activities, ASME (American Society of Mechanical Engineers)

ASME Boiler and Pressure Vessel Code, ASME Power Test Code 4.1

Code for Pressure Piping, NBFU (National Board of Fire Underwriting)

National Electric Code, NBFU Pamphlet #

National Electrical Manufacturer’s Association (NEMA) Standard

2.3 Federal, State and Local Standards

!ENTER AS APPLICABLE!

!**********
NOTE TO SPECIFICATION WRITER: All materials/supplies for which the Government specifies quality standards should be listed here with the respective standards. All standards specified must be reviewed by the writer. NAVFAC EFD (Code 04) have (or have access to) all Federal Specifications and ANSI Specifications.
**********!

3.0 MATERIAL STANDARDS:

ATTACHMENT J-H5

SAFETY REQUIREMENTS AND RECORDS

!**********
NOTE TO SPECIFICATION WRITER: Identify safety requirements that the Contractor will have to comply with. It is recommended the activity's safety officer be involved in the identification of these requirements.
**********!

NAVMAT P-5100 Industrial Safety Standards

OSHA, applicable OSHA Standards

END OF SECTION J

QUALITY ASSURANCE GUIDE

FOR

CENTRAL HEATING PLANT AND DISTRIBUTION SYSTEMS

OPERATION, MAINTENANCE, AND REPAIR

QUALITY ASSURANCE GUIDE
GUIDE PERFORMANCE WORK STATEMENT FOR
CENTRAL HEATING PLANT AND DISTRIBUTION SYSTEMS
OPERATION, MAINTENANCE AND REPAIR

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QUALITY ASSURANCE GUIDE FOR
CENTRAL HEATING PLANT AND DISTRIBUTION SYSTEMS
OPERATION, MAINTENANCE, AND REPAIR

I. INTRODUCTION

A. Overview. The Central Heating Plant and Distribution Systems Quality Assurance (QA) Guide is designed to help the Quality Assurance Evaluator (QAE), under the direction of the Facilities Support Contract Manager (FSCM) in setting up the activity's QA Program. The user is advised to refer to NAVFAC manual MO-327, *Service Contracts: Specifications and Surveillance* for more detailed information on the development and implementation of a QA Program. This Guide suggests specific methods for monitoring services and provides sample QA Plans. These sample plans must be tailored concurrently with the tailoring of this GPWS to develop a unique QA Program that fits the needs of the activity. This QA Guide is divided into three parts:

1. The Introduction presents an overview and gives information on QAE training.

2. QA Plan development provides the user with special considerations that affect the way in which services may be monitored.

3. The third part, QA Plans, provide sample QA Plans with numerical examples. The sample plans provided must be tailored by the QAE to conform with the tailored PWS.

B. Qualifications. QAEs should be qualified journeymen boiler operators or plumbers/pipefitters with experience on heating plant equipment, and should be trained and be fully conversant with the specification. It is recommended that inspectors attend the QAE Training Course provided by each of the NAVFAC geographic EFDs.

II. QA PLAN DEVELOPMENT

A. Functional Considerations. The following considerations in preparing QA Plans for surveillance of central heating plant and steam distribution systems services are offered for user information.

1. Methods of Surveillance. The selection of a method of surveillance to evaluate the Contractor's performance on each performance indicator must be made before QA Plans are written. There are several considerations in determining which QA methods should be used.

a. Relative Importance. Some contract requirements are more important than others. Non-performance or poor performance of a certain contract requirement may have an impact on an activity's mission. If this is the case, that requirement should be considered very important. If a single unit of an item of work is very expensive to perform or to correct if improperly performed, that requirement may also be deemed important. If, on the other hand, the omission of a single occurrence of an item of work has little or no effect, that contract requirement should be considered relatively unimportant, when compared to other contract requirements.

b. Quantity of Work Performed. Quantity of work performed refers to the number of scheduled or expected occurrences of work for a contract

requirement to be performed over a given time period, usually a month. The actual number of occurrences will depend on how a unit of service is defined. Frequency of service at any location may be daily, weekly, etc. The quantity of work performed is easy to determine for scheduled services. When services are performed on an "as required basis", the quantity of work performed must be estimated based on historical or projected data. Large amounts of work of similar nature are ideally suited to random sampling.

c. QAE Resources. Ideally, QAEs should be staffed to the desired QA method. In reality, QA methods used must accommodate the availability of QAEs. One hundred percent inspection requires significant QAE time while validated customer complaints require much less. A combination of QA methods should be considered so as to get the best QA possible with a given number of QAEs. Where extensive travel is required, it is suggested that planned sampling instead of random sampling be used to limit unproductive QAE travel time.

d. Nature of Requirement. As mentioned above, "scheduled vs. unscheduled" is an attribute of a contract requirement. For some requirements the concept of quantity of work performed does not apply. For example, the requirement that the Contractor maintain a Quality Control (QC) program is either achieved or it is not. If the requirement is of this type, planned sampling should be considered.

2. Concept of Substantially Complete. Substantial completeness is a key concept of surveillance of work. Unfortunately, this concept is difficult to explain in such a way as to achieve consistent application. The application of the concept rests on subjective judgment. It is therefore important that QA Plans provide sufficient guidance to make consistent application possible. The general determination of substantial completeness will be addressed here.

a. Definition. Substantially complete performance exists when there has been no willful departure from the terms of the contract and no omission of essential work. The Contractor has honestly and faithfully performed the required work and the only variance consists of minor omissions or defects. In general, work is substantially complete when 90%-95%-99% of the total work requirement is satisfactorily completed. The percentage selected is dependent upon the type of work performed. But, keep in mind that this is a subjective judgment and that there are no clear guidelines established. Substantially complete guidelines must be established for each work item.

b. Application. The concept of substantially complete is used for determination of Contractor overall performance. Each work occurrence evaluated will be classified as satisfactory (S) or unsatisfactory (U) based on QAE determination of substantial completion of work. At the end of the month, evaluated performance of each subfunction will be analyzed and the ODR computed. Payment deductions for work performance judged to be not substantially complete will not be applied to the entire unit of work. Deductions are made for only the work items documented as being defective.

3. Rework. The Contractor is required to reperform all work that has been identified as being partially performed or not performed if the Government so chooses the option of allowing rework. The Contractor must have the capability to dispatch rework crews which are not part of the regularly scheduled service crew. Additionally, if the Contractor is to be allowed the opportunity to correct services, a specific time limit is imposed for

responsiveness in accordance with the "CONSEQUENCES OF CONTRACTOR'S FAILURE TO PERFORM REQUIRED SERVICES" clause of Section E.

4. Customer Complaints. A method to handle customer complaints should be established. Normally the Contractor is to be notified by a copy of the "Customer Complaint Form", except when immediate delivery is a problem. In that situation initial notification can be made over the phone and then followed later by a written complaint. Customer complaint records should be maintained which register the complaint and indicate whether problems were corrected or not. Only complaints validated by the QAE are subject to invoice deductions. Customer complaints are recorded and passed to the Contractor in accordance with rework procedures. The QAE will personally validate work which has been reported as deficient and not corrected within the allowed time period.

B. QAE Staffing

1. QAE staffing should be based on surveillance requirements rather than determining surveillance requirements based on availability of QAEs. There is no precise way of determining QAE staffing requirements without a specific case in mind. Facility location and condition; contract requirements; and other duties assigned to QAEs are important factors that are the basis for staffing and these factors vary from activity to activity.

2. QAE schedules are the documents used to establish staffing requirements. These schedules, based on specific QA Plans and other known duties, are prepared by the QAE and approved by the FSCM. Once QA schedules are prepared, QAE staffing requirements may be determined. If QAEs may be not made available to perform "identified" surveillance requirements, then surveillance requirements are systematically reduced to the level of QAE availability.

C. Performance Requirements. A Performance Requirements Summary Table (PRS) is prepared by the specification writer as the GPWS is tailored (see the User's Guide for sample of a PRS table). This table will be used by the QAE to determine the types of QA Plans required for contract surveillance. The tailored PWS will be the basis for individual plans.

III. SAMPLE QA PLANS

A. The following plans are suggested to the activity for use in monitoring the central heating plant and steam distribution function:

Plan #1 QA Plan for Operation and Maintenance of the Boiler Plant
Plan #2 QA Plan for Maintenance and Repair of Steam Distribution System
Plan #3 QA Plan for Minor Maintenance and Repair
Plan #4 QA Plan for Maintenance Management

B. The specification requirement for the Contractor to submit plant operation procedures does not require a separate QA plan. Either the procedures are submitted by the required date or they are not. If submitted, they must conform to the requirements stipulated in the contract.

QA PLAN #1

OPERATION AND MAINTENANCE OF BOILER PLANT

1. Contract Requirement. Operation and maintenance of the central heating plant.

2. Performance Indicators	Performance Standards
a. Operate Boiler Plant: maintain operational logs and equipment charts, perform required water quality testing and treatment, operate within operational parameters of plant (!LIST SPECIFIC ITEMS TO BE EVALUATED SUCH AS BOILER EFFICIENCY, WATER QUALITY, VOLTAGE, FREQUENCY, POWER FACTOR, ETC.!)	Paragraphs C.15.a - C.15.f
b. Maintain Boiler Plant: maintain equipment in state of good repair (!LIST ITEMS THAT WILL BE EVALUATED TO ENSURE GOOD REPAIR!)	Paragraphs C.15.g - C.15.h
c. Boiler Overhaul: passes certification	Paragraphs C.15.i - C.15.j

!**********
NOTE TO SPECIFICATION WRITER: Detailed descriptions of the performance indicators and standards should be included in the tailored QA Plan. The PRS Table contains suggestions.
**********!

3. Primary Method of Surveillance. One hundred percent inspection.

4. Maximum Allowable Defect Rate (MADR)

a. Operate Boiler Plant	5%
b. Maintain Boiler Plant	5%
c. Boiler Overhaul	0%

5. Quantity of Work. The quantity of work depends on the number of days of operation or maintenance, or the number of overhauls, per month.

6. Level of Surveillance. N/A

7. Sample Size. N/A

8. Sampling Procedure. N/A

9. Evaluation Procedure

a. Operate Boiler Plant

(1) Daily review the submittals for the previous day's operation. Fill out an Operation and Maintenance Evaluation Worksheet recording all of the actual values for the operating standards. Compare the actual values with the standards and determine whether that value is satisfactory (S) or unsatisfactory (U). Place the appropriate letter in the space with the recorded actual value. Total the unsatisfactory ratings for operation and enter in the appropriate block. Conduct an on-site investigation that day if the overall rating for the day is unsatisfactory. Document results of investigation in comment area of evaluation worksheet.

(2) Prepare a checklist of daily submittals. Each day review the reports, logs, and charts received against the checklist. Note in the "Comments" area of the Operation and Maintenance Evaluation Worksheet any submittals not received. NOTE: The checklist should be developed using the contract and approved operating procedures as guides.

b. Maintain Boiler Plant

(1) Review the operating logs to determine what work may be noted on the logs. Verify with the approved maintenance procedures. Detailed review of the timeliness of maintenance will be conducted during a review of the Facility History Files.

(2) Develop a list of maintenance parameters to be monitored throughout the contract life from the approved operation and maintenance procedures. Suggested parameters are shown in the Requirements Summary Table and should be supplemented in the tailored QA plan. Review the daily logs, charts, and records recording the actual parameter values in the appropriate block. Compare these values to the performance standards and determine if the actual value is satisfactory (S) or unsatisfactory (U). Place the appropriate letter in the block with the recorded value. Total all of the unsatisfactory ratings and enter the number in the appropriate block. If the overall maintenance rating is unsatisfactory, conduct a site investigation to determine the source of the problem. Document the results of the investigation in the comment section of the evaluation worksheet.

c. Boiler Overhaul. Make sure all boilers have been certified at some time during previous 12 months. Recertification is required whenever integrity is broken (noted on log). Facility History File will contain copy of certification. This inspection generally done once a year.

10. Analysis of Results

a. Operate Boiler Plant. At the end of the month, summarize all of the operation evaluation worksheets and compute the ODR. The ODR equals the number of unsatisfactory days of operation divided by the total number of operating days during the month.

(1) Performance is satisfactory if the ODR is less than or equal to the MADR.

(2) Performance is unsatisfactory if the ODR is greater than the MADR.

Deduct for non-performance. If performance is unsatisfactory for the month, issue a Contract Discrepancy Report. Also, deduct for reduced boiler efficiency, if appropriate.

b. Maintain Boiler Plant. At the end of the month, summarize all of the maintenance evaluation worksheets and compute the ODR. The ODR equals the number of unsatisfactory days of maintenance divided by the total number of operating days during the month.

(1) Performance is satisfactory if the ODR is less than or equal to the MADR.

(2) Performance is unsatisfactory if the ODR is greater than the MADR.

Deduct for non-performance if appropriate. If performance is unsatisfactory for the month, issue a Contract Discrepancy Report.

c. Boiler Overhaul. If boilers have not been certified, issue a Contract Discrepancy Report. Deduct for non-performance, if appropriate.

EVALUATION WORKSHEET
BOILER OPERATION AND MAINTENANCE

Date:	Performance Standard	Boiler 1	Boiler 2	Boiler 3	Boiler 4
Boiler Efficiency	%				
Boiler Water pH	to				
TDS	ppm				
Alkalinity	ppm				
Hardness	ppm				
Reports, logs, charts					
Total Unsatisfactory Ratings for Operation					
Stack Temperature	degrees				
Condensate Temperature	degrees				
Economizer Temperature	degrees				
Air Preheater Temperature	degrees				
Fuel Strainer Pressure	psi				
Others as applicable					
Total Unsatisfactory Ratings for Maintenance					
Comments					

QAE’s Signature/Date

Contractor’s Signature/Date

QA PLAN #2

MAINTENANCE AND REPAIR OF STEAM DISTRIBUTION SYSTEMS

1. Contract Requirement. Maintenance and repair of steam distribution systems.

2. Performance Indicators	Performance Standards
a. Service Calls	
(1) Response and Completion	Paragraph C.12
(2) Documentation	Paragraph C.12
(3) Quality Work	Paragraph C.12
b. Preventive Maintenance	
(1) Timely Work Performance: within !INSERT! days of scheduled time	Paragraph C.16
(2) Quality Work: no visible leaks, structurally sound, equipment and insulation in good repair, valves and traps fully operational	Paragraph C.16
(3) Documentation: PM Report within !INSERT! days of inspection, information accurate	Paragraph C.16

3. Primary Method of Surveillance. Planned sampling.

4. Maximum Allowable Defect Rate (MADR)

a. Service Calls	
(1) Response and Completion	10%
(2) Documentation	10%
(3) Quality Work	10%
b. Preventive Maintenance	10%
(1) Timely Work Performance	10%
(2) Quality Work	10%
(3) Documentation	10%

5. Quality of Work. The quantity of work will vary depending on the number of service calls and PM inspections performed during the month.

6. Level of Surveillance

a. Normal Surveillance (Level II). The normal level of surveillance will be used at the beginning of the contract, and continue until such time as the ODR indicates a different level is necessary.

b. Reduced Surveillance (Level I). Reduced surveillance will be used when the ODR has been less than ½ the MADR for two months under normal surveillance (Level II). The sample sizes will remain at this level as long as the ODR is less than the MADR.

c. Increased Surveillance (Level III). If at normal surveillance the ODR is greater than or equal to the MADR, change the level of surveillance to increased (Level III). If at Level III the ODR is less than the MADR, return to Level II surveillance.

7. Sample Size

a. Service Calls

(1) Normal Surveillance - !INSERT! service calls per month

(2) Reduced Surveillance - !INSERT! service calls per month

(3) Increased Surveillance - !INSERT! service calls per month

b. Preventive Maintenance

(1) Normal Surveillance - !INSERT! PM inspections per month

(2) Reduced Surveillance - !INSERT! PM inspections per month

(3) Increased Surveillance - !INSERT! PM inspections per month

8. Sampling Procedure

a. Service Calls. The Contractor will submit a Work Control Report by the tenth day of the month for work completed the preceding month. Any service call may be chosen, but consideration will be given to areas with command interest or where unsatisfactory performance has been observed during the previous evaluation period.

b. Preventive Maintenance. The PM inspections for each month can be identified from the PM program. Any PM location may be chosen, but consideration will be given to areas with command or where unsatisfactory performance has been observed during the previous evaluation period.

9. Evaluation Procedure

a. Service Calls. Check each service call for response time, documentation and signature of accepting individual (if available). Review record and inspect with on-site visit. Site visits should be conducted while evidence of work is still apparent. Document all evaluations. Suggested worksheet follows.

b. Preventive Maintenance. PM work will be inspected and PM records will be evaluated for timeliness and proper documentation, including entry in the Facility History Files. Using an evaluation worksheet for PM (suggested worksheet follows), indicate the date of report, if the PM was performed as

scheduled, and the quality of any work performed. Use the comment area to explain or discuss any unsatisfactory rating.

10. Analysis of Results

a. Service Calls. At the end of the month, summarize all of the evaluation worksheets and compute the ODR. The ODR equals the number of unsatisfactory items divided by the total number of items sampled during the month.

(1) Performance is satisfactory if the ODR is less than or equal to the MADR.

(2) Performance is unsatisfactory if the ODR is greater than the MADR.

Deduct for all instances of nonperformance. If ODR exceeds the MADR, issue a Contract Discrepancy Report. Determine the level of surveillance to be used for the coming month and record on the monthly summary form.

b. Preventive Maintenance. At the end of the month, summarize all of the evaluation worksheets and compute the ODR. The ODR equals the number of unsatisfactory items divided by the total number of items sampled during the month.

(1) Performance is satisfactory if the ODR is less than or equal to the MADR.

(2) Performance is unsatisfactory if the ODR is greater than the MADR.

Deduct for all instances of nonperformance. If ODR exceeds 10%, issue a Contract Discrepancy Report. Determine the level of surveillance to be used for the coming month and record on the monthly summary form.

EVALUATION WORKSHEET
SERVICE CALLS

Identifying Number	Building Number	On-Site Visit	Performance Indicators		
			Response/Completion	Documentation	Quality Work

Comments:

QAE's Signature/Date

Contractor's Signature/Date

EVALUATION WORKSHEET
PREVENTIVE MAINTENANCE

PM Report Number	Equipment	Performance Indicators		
		Timely Work Performance	Quality Work	Documentation

Comments:

QAE's Signature/Date

Contractor's Signature/Date

QA PLAN #3
MINOR MAINTENANCE AND REPAIR

1. Contract Requirement. Minor maintenance and repair.

2. Performance Indicators	Standards of Performance
a. Estimates Properly Prepared	Paragraph C.14
b. Completion Time	Paragraphs C.13.a and C.13.b
c. Quality Work	Paragraphs C.13

3. Primary Method Surveillance. Since this work is ordered on a DD Form 1155, 100% inspection of the final product is required.

4. Maximum Allowable Defect Rate (MADR)

a. Estimates Properly Prepared	5%
b. Completion Time	5%
c. Quality Work	5%

5. Quantity of Work. The total number of completed delivery orders for the month.

6. Level of Surveillance. N/A

7. Sample Size. N/A

8. Sampling Procedure. N/A

9. Evaluation Procedure. During the month, the QAE will visit the various job sites while the work is in progress. The visits will be coordinated with the Contractor to insure that each key phase of the project is inspected before it is covered over, thus making inspection at a later time impossible. An evaluation worksheet will be prepared for each phase of the project, and the QAE will grade the performance on a list of checkpoints which cover the standards set forth in the technical section of the specifications. The following information will also be included on the inspection report: date, location, type of inspection, QAE's signature, and a brief description of any observed defects. If a defect is noted, the QAE will inform the Contractor's on-site representatives of the problem and record the following information on the evaluation worksheet: time and date Contractor on site representative informed of defect, action Contractor took to correct the defect, and the date the work was finally accepted. If samples or field tests are performed, a diagram of the project, with the location of the inspection points, will be attached to the inspection report.

10. Analysis of Results

a. At the end of the month, the QAE will summarize all the evaluations on the inspection reports. An ODR is then calculated based on the following formula:

$$ODR = \frac{\text{Number of unsatisfactory grades}}{\text{Total number of delivery orders inspected}} \times 100$$

For example:

Numer of unsatisfactory grades = 12
Total number of delivery orders inspected = 245
ODR = 12 ÷ 245 x 100 = 4.9%

b. If the ODR is equal to or less than the MADR, the service is satisfactory. If the ODR is greater than the MADR, the service is unsatisfactory and the QAE should recommend to the FSCM that a CDR be issued. The QAE will then summarize all defects that have been observed and calculate the appropriate deductions and liquidated damages. The QAE will review the Contractor's invoice and recommend to the FSCM any billing for unsatisfactory on nonperformed work not be paid. This will require an amendment to the DD Form 1155.

QA PLAN # 4
MAINTENANCE MANAGEMENT

1. Contract Requirement. Maintenance management.

2. Performance Indicators	Standards of Performance
a. Maintain facility history files: file all documents	Paragraph C.10
b. Monthly workload plan: submit each month	Paragraph C.7.a
c. Control of passes and badges: obtain and display badges	Paragraph !INSERT!
d. Compliance with station regulations: obey all station regulations	Paragraph !INSERT!
e. Establish quality control program: program submitted	Paragraph !INSERT!
f. Care and cleanliness of Government furnished property: returned in good condition	Paragraph C.4

3. Primary Method of Surveillance. Planned sampling for facility history files, 100% inspection for monthly workload plan and QC program, unscheduled inspections for passes/badges and care/cleanliness of government furnished property, and customer complaints for compliance with station regulations.

4. Maximum Allowable Defect Rate (MADR). The MADR for all performance indicators, excluding facility history files, is 0%. The MADR for facility history files is 10%.

5. Quantity of Work

a. Facility History Files. The quantity of work will be equal to the total number of facility history files.

b. Workload Plan. One per month.

c. Passes/Badges. Will be inspected during on-site investigations of other requirements.

d. Station Regulations. N/A

e. QC Program. One submitted at contract start.

f. Government Furnished Property. Will be inspected during on-site investigations of other requirements.

6. Level of Surveillance. The level of surveillance is not applicable for 100% inspection or customer complaints. For planned sampling:

a. Normal Surveillance (Level II). The normal level of surveillance will be used at the beginning of the contract, and continue until such time as the ODR indicates a different level is necessary.

b. Reduced Surveillance (Level I). Reduced surveillance will be used when the ODR has been less than ½ the MADR for two months under normal surveillance (Level II). The sample sizes will remain at this level as long as the ODR is less than the MADR.

c. Increased Surveillance (Level III). If at normal surveillance the ODR is greater than or equal to the MADR, change the level of surveillance to increased (Level III). If at Level III the ODR is less than the MADR, return to Level II surveillance.

7. Sample Size (Planned Sampling Only)

a. Normal Surveillance - !INSERT! files per month

b. Reduced Surveillance - !INSERT! files per month

c. Increased Surveillance - !INSERT! files per month

8. Sampling Procedure (Planned Sampling Only). Facility history files should be numbered and randomly selected for inspection.

9. Evaluation Procedure

a. Facility History Files. Review the facility history files for completeness and accuracy. The files should contain records of all PMs, repair work, unusual conditions, warranties, and other appropriate data. Worksheets should be developed to use in checking the files. Site visits may be necessary to verify conflicting entries. The results or findings of site visits should be recorded on an evaluation worksheet.

b. Workload Plan. Review the monthly workload plan for completeness. Forward any comments to the ACO.

c. Passes/Badges. When site visits are planned to review other contract requirements, an inspection of passes and badges can be conducted. The results of the inspection should be documented.

d. Station Regulations. Validate all customer complaints of violations of station regulations.

e. QC Program. Review the quality control program at contract start. Forward comments on the program to the ACO.

f. Government Furnished Property. When site visits are planned to review other contract requirements, an inspection of Government facilities can be conducted. The results of the inspection should be documented.

10. Analysis of Results

a. Facility History Files. The QAE should summarize the results of the inspection of the facility history files and compute the ODR. The ODR equals the number of unsatisfactory files divided by the number of files inspected for the month.

(1) Performance is satisfactory if the ODR is less than or equal to the MADR.

(2) Performance is unsatisfactory if the ODR is greater than the MADR.

Deduct for nonperformance. If performance is unsatisfactory for the month, issue a Contract Discrepancy Report. Determine the level of surveillance to be used for the coming month and record on the monthly summary form.

b. Workload Plan. Failure to submit and have a monthly workload plan approved is considered unsatisfactory. A Contract Discrepancy Report should be issued if the Contractor is at fault. Deduct for nonperformance, if applicable.

c. Passes/Badges. When defects are noted in the control of passes and badges, document and issue a Contract Discrepancy Report or other written notice. One defect is considered unsatisfactory.

d. Station Regulations. Notify the Contractor of all validated customer complaints by forwarding a copy of all customer complaint forms (to be developed in the tailored QA plan). Issue stop work orders under ACO's signature if there is danger of injury to personnel. One defect is considered unsatisfactory. Issue Contract Discrepancy Reports when applicable.

e. QC Program. Failure to submit a quality control plan is unsatisfactory. Deduct for nonperformance. Work through ACO to resolve any problem with Quality Control Program at contract start.

f. Government Furnished Property. When defects are noted in the care of Government facilities, notify the Contractor in writing. Allow adequate opportunity for correction. Deduct for documented nonperformance or unsatisfactory performance, and issue a Contract Discrepancy Report.

CUSTOMER COMPLAINT
EVALUATION WORKSHEET

Complaint Date/Time _____

Source: Organization _____

Individual _____

Description _____

_____

_____

_____

_____

Contract Reference _____

On-Site Visit Date _____

Validation _____

Contractor Informed: Date _____ Time _____

Manner _____

Action Taken by Contractor _____

_____

_____

_____

_____

Response Validated (Signature/Date) _____

Comments _____

_____

_____

_____

_____ _____

QAE's Signature/Date Contractor's Signature/Date

END OF QA GUIDE